



MANUFACTURERS' RECORD

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER

Trade-Name Registered in the U. S. Patent Office.

VOL. LV. No. 8. }
WEEKLY. }

BALTIMORE, MARCH 4, 1909

• \$4.00 A YEAR.
{ SINGLE COPIES, 15 CENTS.

Manufacturers' Record.

PUBLISHED EVERY THURSDAY BY THE
MANUFACTURERS' RECORD PUBLISHING CO.
BALTIMORE.

RICHARD H. EDMONDS, President.
FRANK GOULD, Vice-President.
VICTOR H. POWER, Treasurer.
L. S. FIELD, Secretary.

RICHARD H. EDMONDS,
Editor and General Manager.

EDWARD INGLE, Managing Editor.

ALBERT PIENIS,
General Staff Correspondent.

Branch Offices:
New Orleans—1012 Maison Blanche.
New York—52 Broadway.
Boston—170 Summer Street.
Chicago—1116 Fisher Building.
St. Louis—543 Century Building.

Subscription, \$4 a year
(payable in advance) to United States,
Mexico, Cuba, Porto Rico, Hawaii and the
Philippines.

To Foreign Countries (including Canada) in
the Postal Union, \$6.50 a year.

[Entered at the Baltimore Postoffice as sec-
ond-class matter.]

BALTIMORE, MARCH 4, 1909.

VOICE OF THE PEOPLE.

De-lighted!

"A BUSINESS-GETTER."

The Peck-Hammond Company, heating and ventilating engineers of Cincinnati, writing under date of February 19 in regard to the *Daily Bulletin* of the Manufacturers' Record and its value in getting business, says:

As you know, we are heating and ventilating engineers, also manufacturers and contractors for the erection of heating plants of all kinds, operating very extensively in the South, and your *Daily Bulletin* is carefully examined every day on its arrival, and the tips followed out often to an advantage. We consider it the most reliable advance information that we get, using information obtained from the *Daily Bulletin* in preference to any other.

Are you looking for business? If so, have you tried our *Daily Bulletin* in order to keep thoroughly informed as to what is being done in every line of business?

SAVINGS BANKS' INTEGRITY.

It is hoped that Governor Crothers of Maryland will catalogue as it deserves the communication of a Baltimore attorney attempting to criticise the administration of the Savings Bank of Baltimore merely because it has been so wisely managed that it has built up a good surplus—ample to protect depositors in every hour of need. The lawyer

wants to compel the bank to distribute this surplus. No institutions of the kind in any other city, perhaps, have been better managed in the interests of their thousands of depositors than the savings institutions of Baltimore. We can recall no substantial criticism of them

on the part either of the great mass of their depositors or of experts in finance competent to give expressions to opinion of real service to the community. The policy of the management of the Savings Bank of Baltimore assailed by one of its 45,000 to 50,000 depositors—the Baltimore attorney—is probably a part of the general policy of conservatism designed to protect thousands of widows and orphans whose deposits stand between them and dependence against the possibilities of unnecessary distress, if not loss, lurking in such communications as that of the Baltimore attorney.

of any commission, council, board, or other similar body, or any members thereof, or for expenses in connection with any work, or the results of any work or action of any commission, council, board, or other similar body, unless the creation of the same shall be or shall have been authorized by law; nor shall there be employed by detail, hereafter or heretofore made, or otherwise personal services from any executive department or other Government establishment in connection with any such commission, council, board, or other similar body.

It is hoped that the end sought in this statement may be gained. But, in that event, what is to become of graduates of schools of philanthropy, of the hordes of doctors of foolosophy being turned out by the gross from departments of sociology without equipment for productive work, of individuals who have mistaken the sound of the farm dinner-horn for a call to preach the gospel, and of other departures from normal callings who in ever-increasing numbers have come to point their jowls toward uncalled-for and oftentimes unauthorized-by-law uplift movements sponsored or patronized by the National administration?

THE STEEL SITUATION.

Discussing conditions, such as the bitter competition and the price-cutting in the steel trade which finally resulted in the organization of the United States Steel Corporation, the *New York Journal of Commerce* says:

War was evidently imminent, and a war from which, while the stronger companies might emerge without serious detriment, the weaker ones would probably suffer absolute ruin. Hence the controlling interests in the steel combinations, not merely to protect their own holdings, but to retain their prestige with the speculative public and to prevent a general decline in stock values, determined that the threatened war should be avoided. The question arises today whether the formation of the United States Steel Corporation did more than postpone the inevitable struggle, and whether anything short of an absolute and all-embracing combination of every steel interest in the country could accomplish all that was hoped for from the formation of the gigantic trust of 1901.

The suggestion of the *Journal of Commerce* is not new. Many people in the iron and steel trade, as well as in the financial world, have long believed that, sooner or later, the independent iron and steel people would have to come together in a great organization, thus practically giving to two companies almost the entire iron and steel trade of the country. There are some who believe that this will go even further, and finally result in a combination worldwide in its scope, but we doubt the feasibility of such a scheme if ever attempted.

As pointed out in the MANUFACTURERS' RECORD last week, the present situation in the steel trade is almost certain to result in some very far-reaching changes, and among these may be the entrance into the South of some of the independent companies with a view to getting a foothold in that territory in order to be on an even basis with the Steel Corporation so far as the Southern situation is concerned.

SUPPRESSING THE SOCIOLOGIZER

It is a remarkable commentary upon the lawlessness that has prevailed at Washington that a member of Congress should find it necessary, as did Representative Tawney last week, to seek to embody in an appropriation bill the following provision:

That hereafter no part of the public moneys, or of any appropriation heretofore or hereafter made by Congress, shall be used for the payment of compensation or expenses

appropriate sufficient money for building such a car, and for its maintenance, and that the President of the United States be encouraged in this way to visit every section of the country, that he may personally come in touch and know the people, without regard to political affiliations, and in this way know their needs and their opportunities as he could not in any other way. Instead of being extravagant, this would be a matter of very great economy for the good of the whole country.

THE LATE SOUTHERN COMMERCIAL CONGRESS.

With the knowledge in our possession about the origins of the late Southern Commercial Congress dating back farther than last spring, and of its developments during the past six months, we are amazed that any man of affairs who has been able to follow its outgrowths through half a dozen Southern newspapers publishing them in good faith could for a moment regard it as a business proposition of any possible value to the South.

That is our brief answer to anybody desiring to know why the late Southern Commercial Congress at Washington has failed to find favor in our eyes. We are here and now elaborating that answer for the benefit of a few individuals who, like two from whom we received inquiries within the past few days, have either not followed carefully the campaign of the MANUFACTURERS' RECORD on this line or who are victims of adroitly confusing impressions about our attitude.

We believe that we shall demonstrate that neither is the Southern Commercial Congress a novel manifestation nor that the MANUFACTURERS' RECORD, in taking no stock in it, has departed one hair's breadth from a policy maintained vigorously and successfully for years in the interest of the South, and even of those Southerners who for a time may be misled into misunderstanding us.

Fifteen years ago, in response to a suggestion made by a well-known citizen of Georgia through the columns of the MANUFACTURERS' RECORD, there assembled in New York, upon the call of 50 bankers, merchants and lawyers of that city interested in Southern development, nearly 200 representative men of this country, whose action resulted in the organization on July 12, 1894, of the Southern Exchange Association, a "permanent" body "of business men of the North interested in Southern development and of Southern business men, to provide the ways and means for ascertaining, advertising and in all ways advancing the development of the whole South." The character of this body is indicated by the list of its officers and members. They were:

President, Hugh R. Garden; vice-president, Stuyvesant Fish; treasurer, John H. Inman; general manager, R. W. Wilson.

Executive Committee—Hamilton Dissitt, Samuel M. Jarvis, George H. Sulli-

van, John H. Inman, R. H. Courtney, H. M. Caldwell, Harry Allen, Alex. C. Haskell, J. Skelton Williams and Hugh R. Garden.

State Representatives—H. M. Caldwell, Alabama; Clifton R. Breckinridge, Arkansas; D. H. Elliott, Florida; D. B. Dyer, Georgia; R. H. Courtney, Kentucky; Harry Allen, Louisiana; R. H. Edmonds, Maryland; W. G. Yerger, Mississippi; Jerome Hill, Missouri; Julian S. Carr, North Carolina; Alex. Haskell, South Carolina; I. F. Peters, Tennessee; Walter Gresham, Texas; J. Skelton Williams, Virginia; A. B. Fleming, West Virginia, and Boyd Smith, District of Columbia.

Members at Large—J. A. Lane, Boston; Aretas Blood, Manchester, N. H.; Gen. Russell A. Alger, Detroit; Theo. Frelinghuysen, New Jersey; J. Wilcox Brown, Baltimore; T. K. Worthington, Baltimore; Clinton Furbish, District of Columbia; Hamilton Disston, Philadelphia; Clarence Clarke, Philadelphia; William McAdoo, District of Columbia; Thos. P. Grasty, Versailles, Ky.; Abram S. Hewitt, Stuyvesant Fish, James Swann, S. M. Jarvis, Chauncey M. Depew, William R. Grace, Walter Stanton, Henry M. Flagler, Henry B. Plant, John H. Inman, Hugh R. Garden, Chas. A. Deshon, W. G. Maxwell, R. W. Wilson, Atwood Violett and George H. Sullivan, New York.

The scope of the enterprise, which was to have its principal place of business in New York, and prospective agencies and offices elsewhere in this country and abroad, is indicated by the bureaus planned. These bureaus were to deal with health and climate statistics, permanent exhibits, agriculture, manufacturing, mining, timber, water-powers, transportation, information, advertising and publication, legislation, settlers, foreign commerce and domestic commerce.

The plan of organization omitted no material interest in Southern development. No more representative body of Southerners at home and in other parts of the country and of men of other parts vitally interested in the South could have been gathered for the formulation of practical, businesslike plans for Southern development.

Yet the undertaking went into the air, and its going was by the same route which has been followed by every similar project launched since that time. The more such a plan is studied the more certainly is its inevitable death foreseen. The mere money loss possible in such schemes is trifling compared with the effects of consequent reaction upon the South to its great injury, in that they give a false impression among the uninformed of the character of the real South and discourage well-meaning participants in them for practical work.

The death of the New York undertaking did not prevent other attempts to use the pretense of Southern conventions, congresses, parliaments, etc., of various kinds, to which equally earnest and enthusiastic and representative Southern men have been induced to lend their names and support, for the furtherance of schemes alien to the South and, if successful, detrimental to the South, for the temporary relief of some drifter with assumptions taken on faith alone or for the promotion of menacing educational, ecclesiastical, racial or social propaganda. We have in our archives complete records of every one of these attempts made during the past 10 years.

It appears from these records that there is almost something more than mere coincidence in the means adopted and even in the language employed in trying to

persuade representative Southern men to give them countenance.

One of them, which ended in a fiasco at Philadelphia in 1901, and which would have seriously injured the South had it not been for the vigorous exposition of its absurdity and futility made by the MANUFACTURERS' RECORD, was under the auspices of a "Southern Industrial Association" which included among its "charter" members more than a dozen commercial bodies of the South and many well-known men, and men devoted to the South's interests, including railroad officials, manufacturers, merchants and public officials.

A later gathering, into which an utterly alien element dominantly but in cloak entered, over which a Southern Governor presided, and which also became "permanent," was, from the earnest standpoint of the Southern men concerned in it, for the benefit of the South. But it was in reality the outcome of a plan originating in Italy to flood the South with Sicilians. That plan in that form was successfully combated by the MANUFACTURERS' RECORD, but it emerged again under another form in another "permanent" Southern organization, with another Southern Governor as president, but with a transatlantic steamship company engaged in transporting immigrants from Southern Europe as apparently the chief beneficiary had the scheme developed. Biding their time for another venture whenever the South might be off its guard as to immigration, the actual promoters in this country of both these "Southern" undertakings which had deceived representative Southern men were found joining hands in an organization in New York designed to blind the eyes of this country to the evils reeking in immigration from Southern Europe, of the kind being sent to this country, and to make the National Government an unwitting party to the scheme to turn the noxious flood into the South. The latest light upon this menace was thrown the other day by Senator Frank B. Gary of South Carolina. Speaking in the United States Senate of recent transatlantic steamship activity that has brought about, through our feeble laws and their lax administration, a startling change in the character of our immigration, he said:

One of the most notable effects has been the shifting of its source from the kindred peoples of Northwest Europe to the alien brownish races of Southeast Europe. That the profit-making choice by these foreign steamship lines and the connivance of certain European Governments are not giving us the best, even of these peoples, but much of their poorest, are matters of repeated official record.

Senator Gary alluded to the discovery by an official of our Government of documentary evidence that a foreign government had actually made a contract with a transatlantic steamship line to deliver for transportation to this country a minimum of 30,000 aliens annually, and on that Senator Gary said:

It was a plain bargain to dump upon our shores at least 30,000 of her worst, most degraded slum population, if not her criminal and social outlaws and outcasts.

It was a series of facts of this character which led the inspector—

* * * to conclude that some European Governments, as well as private individuals and interested societies, still regard the United States as a dumping ground for thousands of their most undesirable persons.

The MANUFACTURERS' RECORD knows that representative Southerners would be astonished to learn how close they have come in Southern gatherings of various kinds with the witting or unwitting agents of these alien-fostered

immigration schemes directed against the South and its best interests. But immigration has been but one of the schemes for the ostensible benefit of the South which in the past 10 years have lived their little day as long as financial support, usually by way of New York, has been maintained.

At the risk of losing long-time friendships and of being misunderstood as criticising public officials and business men of the South in our disinterested efforts to prevent them from being committed to mistakes for the South, the MANUFACTURERS' RECORD has never hesitated to call attention to the chances for mistakes in all these movements. We know that deliberate misrepresentation of us has been made by the real promoters, but seldom coming into the open, of the movements, which in latter years have been largely different phases merely of the same movement, but we have been content to rest upon the conviction that time will prove the wisdom and good intent of our advice.

In all the developments about the late Southern Commercial Congress at Washington there has been absolutely no material departure from the methods of earlier schemes, with the exception of the plan for financing that \$1,000,000 Southern Architectural Monument at Washington. It may hardly be worth while to recall misleading suggestions made in getting together the meeting at Washington last December or to point out the manifest contradictions in statements, of evident common origin, of December 11 at Washington that \$300,000 had been pledged for the building, and of December 17 at New Orleans that \$150,000 more had been pledged, when contrasted with the statement of January 17 at Atlanta that "pioneer contributors" had then and there, a month after the announcement of \$450,000 pledged, subscribed \$23,000. But the MANUFACTURERS' RECORD is somewhat curious to know how many business men with their eyes open will seize the opportunity, presented from Washington two weeks ago with the prospectus of this Southern Commercial Congress, to fill out a draft for \$250 to be paid for the account of a body which the prospectus states is to be an "unincorporated, voluntary association," and to fill out at the same time three notes for \$250 each, with 4 per cent. interest from date, to be paid for the account of the same unincorporated association. The instructions, with no responsible name signed to them, as to this endowment fund speak of the headquarters that "will be established," of a social organization "proposed to be formed," and of certificates of membership which "will be ultimately delivered" in exchange for the receipt of the draft and the three notes.

How is it expected that business men are to be attracted to any undertaking designed for the development of the South that in this bland financial plan reveals such a lack of business instincts?

Why should any business man, under prompting from a source that he will not name to us, seek an explanation of our refusal to countenance a movement upon such a foundation of wind?

One of the Southern business friends of the MANUFACTURERS' RECORD asks us whether, assuming that this movement would soon prove a burst bubble, would it not be more consistent with our policy for the upbuilding of the South to mention that the movement as announced deserves approval and commendation, and that, if the plans carry, the results will be beneficial? There can be but

one answer to that suggestion, the significance of which we do not believe our friend considered. Should we commend as worthy of approval any movement which we believe would not benefit the South, no matter how earnest and sincere Southern men might be in promoting it, the MANUFACTURERS' RECORD would stultify itself and be unworthy of a hearing from anybody interested in the welfare of the South. We believe that the Southern Commercial Congress movement has nothing in it of possible benefit to the South and, consequently, without reflecting for a moment upon the sincerity of Southern friends who may not agree with us on that point, we not only cannot say that it deserves approval, but we must say that it ought not to be encouraged.

All bubbles must burst. The larger the bubble, the greater the damage to the South in its bursting.

GUARANTEED DEPOSITS.

Statesmen contemplating legislation in the direction of State guaranty of bank deposits ought not to act before they have opportunity to read a dispassionate review by W. C. Webster in the *Journal of Political Economy* of the situation as developed under the guaranty law in Oklahoma and the menacing possibilities in it. The writer says:

The State today seems to be entering upon an era of wildcat banking, which, if it is not checked, will ultimately result in financial disaster. There has been a very rapid increase in the number of State banks, and in most localities this mushroom growth has not been warranted by the increase of loans or by general business development. Furthermore, most of these banks have been capitalized on the minimum legal basis, viz., \$10,000, and at the same time numerous State and National banks in the process of reorganizing have reduced their capital to the same minimum. Thus the underlying security of the State's banking system has been greatly diminished. Unfortunately, also, many of the members of the State's banking fraternity are undeniably incompetent and inexperienced in the business, their dishonesty, and in some cases criminality, has been clearly proven, and they are conducting their banks in the most reckless manner, offering rates for deposits that no conservative banker could possibly afford to pay, presumably in order to raise funds with which to engage in various kinds of speculation.

The possibilities for speculative banking seemingly afforded by this law are too alluring to expect the pseudo-financiers of Oklahoma to rest content with that paltry record. Certainly it is that the State mill has not yet ceased to grind out its grist of new bank charters.

The writer cites two towns about eight miles apart, one with a population of 578 and the other with 470, each of which had two national banks when the law went into effect. Each has now a State bank, and one more State bank for each town has been organized. The aggregate capital of the six banks is \$120,000. Another town of about 1000 population has four banks, with aggregate deposits less than \$100,000. A village of 150 population has two banks, with total deposits of \$15,000. At another point a man just released from the penitentiary has organized a bank. A saloonkeeper, shut out of business by a prohibition law, started a bank with very small capital, and soon had deposits ranging between \$30,000 and \$40,000. Suggesting possibilities, Mr. Webster says:

What but the most drastic and efficient inspection and supervision, thoroughly alert to discover and thwart all the tricks of keen, dishonest bookkeepers, can prevent unscrupulous men from organizing a bank capitalized at the legal minimum, creating large fictitious deposits as the proceeds of a lot of dummy notes, then letting the bank close its doors and calling on the guaranty fund to pay these deposits in cash? The question naturally arises, How can men of the char-

acter cited in the above examples secure large deposits? The answer is very simple. When it is generally believed that deposits in all banks are equally safe, all that an unscrupulous banker has to do is to offer high rates of interest and the deposits roll in unstinted. Under the new Oklahoma law we find reckless bankers offering 5, 6 and even 8 per cent, presumably to secure funds to use in all sorts of speculation. It is true that the banking board has limited the rate to 3 per cent, on short-time deposits and 4 per cent, on long-time deposits, but the order is being evaded all over the State by bank officials personally paying the excess over the legal rate. Not only have excessive interest rates been offered, but a good deal of misrepresentation has been indulged in to attract large deposits. Everything possible has been done to create the false impression that the State's credit is pledged to pay all losses.

It may be true that the Oklahoma law has not been in operation long enough to be fairly judged in all its bearings. It is true that, under banking systems not having State guaranty of deposits, dishonesty, inexperience and criminality are to be found. It is also true that in a State like Oklahoma, full of opportunities for the profitable employment of money, higher rates of interest are warranted than those prevailing in communities where productive energies are at a minimum, and unhealthy congestion of money makes money-owners, and not money-borrowers, the bidders for business for money. Nevertheless, the remedy for defects in our banking system lies, as Mr. Webster points out, not in creating a false confidence in all banks by apparently removing the need for ordinary, reasonable discrimination in selecting bankers and attempting the impossibility of making all banks equal, but in strengthening the safeguards of honest, conservative and efficient banking, leaving the individual bank to work out its own destiny upon normal lines.

CONSERVATION EXAGGERATION.

Sober sense of the country is beginning to reassert itself in regard to the question of the conservation of our natural resources. Illustration of this is had in a reference made by Mr. John Birkinbine before the Franklin Institute, which is mentioned by the *Iron Age*, as follows:

He emphasized the point that the conservation of resources is not merely holding them in reserve for the future, but judicious, practical utilization. He added that the theorist is not to be thanked for the growing interest in this subject, since thousands of active brains have been at work on our economic problems, adding to the material wealth of the country and the comfort of the people, by reducing the consumption of resources, lowering costs of production or converting waste into valuable materials. Reference was made to President Roosevelt's statement at the Washington conference that the nation's increase in the consumption of coal in 1907 over that of 1906 exceeded the total consumption of the year 1876. In comment Mr. Birkinbine said: "Had President Roosevelt added to his remarks concerning coal that, had we used fuel as wastefully in 1906 and 1907 as in 1876, the yearly annual increase for consumption would be more than double the production for 1876, the real advance of the country would have commanded attention without weakening the plea for conservation."

This view of Mr. Birkinbine coincides with expressions made some weeks ago in a personal communication from the MANUFACTURERS' RECORD to an ardent supporter of the conservation propaganda. Bearing upon the contention of Mr. James J. Hill, that the fertility of our soil was steadily decreasing, we made the point that Mr. Hill had judged only from surface conditions and had not at all taken into account the changes that have taken place since, having finished opening up the prairie lands and by overcropping having brought about a decline in the yield per acre, recovery

had been made during the past 10 or 15 years largely through the work of the agricultural colleges of the country. Subsequently the conservation commission itself stated that there had been a gradual increase in the production per acre in recent years.

It has been said for years by every well-informed man that the South, for instance, could double its entire production of farm crops (and cotton furnishes only one-third of the total value of Southern crops) without adding an acre to the amount under cultivation. For 20 years this persistent work has gone on. Great improvement is under way, though much remains to be done. The agricultural colleges of the South have worked marvels in what they have accomplished in that direction, and especially in the diversification of farming. They have been at it for years. The same conditions are true in much of the West, where the yield per acre of cereals has been so greatly increased under the teaching of the agricultural colleges of that section.

The objection we raised against the then prevailing hullabaloo about "conservation" was that it was making people not thoroughly informed on the subject believe that everything had been going to the dogs, and attributing the whole change which the future is destined to show to this present work, whereas thousands of earnest, active, scientific men had been quietly plodding along, teaching the farmers how to improve their soil and increase their profits, while other thousands of experts in the use of oil and coal had been striving to bring about a higher state of efficiency in the use of these materials. These people, who are the real scientists and the real workers, of course welcome all help that can come from public agitation; but we wanted to see them receive the due measure of credit for the pioneering work they had done.

The "conservation" campaign recently launched was calculated, by the way in which the daily papers have handled it, to give to the rising generation a false impression—really a false education—since it made them think that nothing had been done along these lines until recently. Thus it took from the plodding workers in scientific agriculture and manufactures the credit which they ought to have for what they have accomplished.

Take, for instance, the use of coal. The scientific men who are responsible for the details of the great \$75,000,000 steel plant at Gary have designed it in such a way that the hitherto wasted gases will be utilized in running engines. In this way they will save hundreds of thousands of tons of coal a year. That is the kind of conservation which ought to be heralded everywhere and which ought to have received unbounded credit in the Conservation Congress; but we expressed our doubts in the letter whether "a single man in that congress ever mentioned it, or similar work, as an illustration of how science is bringing about a great increase in the efficiency of coal and other products and how science is rapidly improving our soil."

'TIS ALL OVER.

"Myself and Mr. Taft are in perfect accord regarding the subject of the tariff," are the words credited to James W. Van Cleave of St. Louis. Then, why all the expense and flurry of a special session of Congress?

Mr. Andrew Goddard of Waco, Texas, writes to the MANUFACTURERS' RECORD:

I am so glad that the MANUFACTURERS' RECORD resents the implication that the South is a heathen or an object of charity. We need others' money only as they may invest it in the development of the resources of our common country for the common benefit.

CANADA'S PROGRESSIVENESS IN RAILROAD BUILDING AS AN OBJECT-LESSON.

On July 11, 1907, the MANUFACTURERS' RECORD, in an editorial entitled "An Appeal to Reason," said:

The call of the developing world for the financial world's surplus capital is the wonder of the ages. The people of the South and of the country at large have so long boasted of our great natural resources, of our commanding position in the world's affairs and of our increasing wealth that we have begotten a false pride, and pride is often a forerunner of a fall.

In the panic of October, or three months after that editorial, the fall came.

It was pointed out in that editorial that capital seeks the most inviting field for investment, regardless of whether that field be Africa, Canada, Mexico, South America or the isles of the sea, and that wherever capital feels that it is the most amply protected, and at the same time can find the best returns, there it inevitably centers, without regard to place or nationality. Attention was called to the fact that already \$700,000,000 of American money had been invested in the development of Mexico, many millions had gone to Cuba and that Brazil and Argentina were offering a most attractive field for vast investments, and, referring to Canada, it was said:

While these conditions are going on to the south of us, Canada, on the north, is moving with even greater strides. Bustling with activity rivaling the greatest ever seen in any American business centers, broad-gauged, farseeing leaders in Canada are striving with tireless energy to make that country a real, living, tangible rival of the United States in trade and wealth.

And in the midst of a period of the greatest activity ever seen the question was asked:

Has not the time come for the people of this country to take a saner view of things, and, instead of joining in the work of tearing down, to take part in the upbuilding of the great business development of this country? Unless poverty is to take the place of prosperity, unless idle men are to walk our streets seeking in vain for employment as in 1833 to 1836, unless we want to destroy the temple and carry ourselves down in the ruins to business death, the thinking people of this country must awake to their individual responsibility to face the issue and stem the destructive tendencies of the times. In our madness we may destroy the railroads and the great business interests of the country, but the people are the ones who shall suffer most.

Prosperity gave way to poverty and idle men did walk the streets seeking in vain for employment. While there is, after 18 months of inactivity in many lines, great poverty with many people and many thousands of men are still out of work, there are marked signs of an improvement, this improvement being just in proportion as the country has turned to a saner view of things. Discussing this situation, the New York *Times* calls attention to the very limited improvement work that is under way by the railroads, and to the very small amount that is being expended for railroad betterment. It refers to the announcement made by the Burlington Line that its improvement budget for this year is \$1,000,000, against \$8,000,000 last year and \$16,000,000 for 1907. It points to this as an illustration of what is going on throughout the whole railroad industry of the country, and adds:

The Burlington Railway declared officially

that it must have a rest from despoliating legislation. In 11 States along the Burlington route 272 laws are pending. In the last two years 800 railway laws have been passed in those 11 States and the effect upon revenues has been serious.

Similar views as to the causes which have prevented railroad improvement by reason of the impossibility of securing capital are credited to other railway officials. And then the *Times*, referring to the two countries—Mexico and Canada—mentioned in the editorial of the MANUFACTURERS' RECORD of 1907 as rivals for the world's capital with us, says:

On Thursday the Alberta Government guaranteed bonds at the rate of \$20,000 per mile for railway construction by Kansas City capitalists. It also guaranteed 850 miles of Canadian Northern branch lines and 500 miles of Canadian Pacific branches. The aggregate of the day's business was \$27,500,000. On the previous Thursday the Manitoba Legislature began the favorable consideration of a railway projected by Mr. James J. Hill. The Canadian Pacific itself is expending \$6,000,000 on extensions and important electrical improvements. We announced a few days ago the Southern Pacific's financing of the remainder of 1500 miles in Mexico, of which about one-third have been built. Mr. Harriman himself has no preference for Mexico, but declared his readiness to spend some \$10,000,000 in Georgia if he could have fair play, asking no favors. The distinction is not along lines of principle, it will be seen. The very men whom we denounce as malefactors are regarded as benefactors north and south of us.

The adverse effect of the course we are following is not confined to the railways and steelmakers. Not long in the future the railways built while we are preventing construction will be competing with our dwarfed systems. The crops along their lines will have the advantage in the world's markets and the lands on which they are raised will be yielding unearned increments to their fortunate owners. Why tie our own hands and prejudice our own producers by prosecuting further a policy which has failed before, even as it is now failing before our eyes?

These facts are worthy of very serious study. It is not the railway people alone that are the sufferers; for, while we are not increasing our transportation facilities, other countries are. Their systems are being developed, while ours are being dwarfed. As the *Times* says, the crops along the new roads which are being built in Mexico and Canada will be yielding large profits to the producers and the land be increasing in value by reason of better transportation facilities, while our farmers will suffer for lack of transportation. For a while the South was the most active, or rather some Southern States were the most active, in this unwise railroad legislation and agitation, though nearly all States have been guilty and the National Government has led the procession. The hysterics which brought forth in Congress and in State Legislatures thousands of bills, many of them unconstitutional, impracticable from every point of view, and some of them absurd in the extreme, are disappearing; the reaction is under way, and we believe to a greater extent in the South than anywhere else. Swept from their old-time moorings of safety and sanity and conservatism by the wave of hysterics, many Southern States lost their bearings, and in doing so their action cost their people many hundreds of millions of dollars; but they are getting back to safer anchorage with great rapidity. If in the time of hysterics the South had stood solid for the protection of capital, whether invested in railroads or any other line of industry, it would have made itself known throughout the world as the safest place for investments. It would have drawn into the utilization of its vast resources, into the building of railroads, the construction of harbors and

docks and warehouses and factories the surplus capital from every part of America and Europe seeking investment.

In August, 1907, the MANUFACTURERS' RECORD on this point said:

Instead of leading in agrarian agitation the South should lead in conservatism. It should stand as a bulwark against the wild agitation of the day and prove itself a leader in protection to property and a leader in sanity, and thus make for itself a name as the great conservative force of the United States. Such a course would bring untold honor and more wealth than any other section has ever known. Standing immovable against the false doctrines of the day, as the conservator of constitutional rights and guaranteeing the fullest protection to every vested interest, the South would have an opportunity such as was never given to any other people.

But the South missed the golden opportunity of a century. It has paid its price. It has learned its lesson, and in proportion as it is making known to the world the change in political sentiment, so is the world's capital again turning to this section, and it will turn with a rapidity and in volume fully meeting the rapidity of the change of sentiment which may take place from radicalism to conservatism.

THE THOUGHTFULNESS OF SOME OF OUR READERS.

A leading banker in Kentucky, writing under date of February 13, says:

I have read the MANUFACTURERS' RECORD for several years and find it a great source of inspiration. You are doing a great work for the South and its material welfare.

And then he asks us to discontinue his subscription to the MANUFACTURERS' RECORD because of the fact that, as he is connected with a publishing company in that city which receives the paper in exchange, he is able to make one copy answer for his newspaper as well as for his bank.

About the same time came a letter from Oklahoma in which, referring to the value of the MANUFACTURERS' RECORD and the interest with which it was generally read, it was said:

It seems to me if only one MANUFACTURERS' RECORD was taken in a block, everybody in the block would borrow it instead of subscribing for it. Such is human nature.

A few weeks ago one of our traveling men found a case in which one copy of the MANUFACTURERS' RECORD is read regularly by 16 different men in a Southern town, the arrangement being that it is passed from one to the other as rapidly as it is read.

In these interesting phases of a situation which every paper meets with we have no complaint to make. We are glad to know that 16 men in one town are so anxious to read the MANUFACTURERS' RECORD that they will do it, even though they wait their turn in order to get a chance, and that out in Oklahoma one copy in a whole block is passed up and down the block for everybody to read.

We are glad that a banker, who so greatly appreciates the work of the MANUFACTURERS' RECORD in behalf of the South, is able to save for his bank \$4 a year by going to the office of the newspaper with which we exchange and get the benefit of it there after the editor has finished his reading. And yet there is just one little thought that creeps into our mind. Would not the people who are doing this—and there are many of them in the South—feel just a little better in their own mind if they were subscribing in their own name, or in the name of their business concern, for the paper which they all feel is so essential to them and so essential to the best interests of the South?

It is true that if everybody who reads the MANUFACTURERS' RECORD subscribed

for it, we might find a little difficulty in securing paper enough or a printing office big enough to handle it. We know that very many of our readers borrow it from others in a spirit of kindness to us in order to avoid adding to our burdens the worry and trouble of printing the extra copies which would be needed if those who really find it valuable should all become individual subscribers. We know that the 15 people who borrow the one copy, and the banker who borrows the exchange copy, and the others who go up and down the square borrowing it from some neighbor, are doing it wholly out of their good feeling for us. They are trying to avoid the necessity of increasing the printing-office equipment. They know that it has been rather difficult for us to increase our clerical help and stenographers rapidly enough to keep up with our business, and they know that the office space which three years ago, when we took our present location, seemed ample for many years to come, is now so overcrowded that we can hardly find space for new clerks.

We appreciate all of this, and yet there is just a feeling in our mind that we would like to see the thing tried out and have every man who writes us that he is a reader of the MANUFACTURERS' RECORD, and even those who read it without writing us about it, become an actual subscriber. We would like to see this, and not for our good, but for the good of those non-subscribing readers. We have preached many sermons against the desire of people "to get something for nothing" as a false basis for the development of manhood or the development of business, and then we are making this suggestion for the benefit of those of our subscribers who are constantly finding their copy disappearing and who sometimes hardly have a chance to read it before someone steps in to borrow it. We want to give those who pay for the paper the opportunity of keeping it in their office, and we want to give to those who are of the borrowing fraternity the opportunity of realizing how much better it is to own than to borrow. But if you cannot afford to subscribe, keep on borrowing. You will be benefited and your business will grow to a point where you can afford the luxury of an individual subscription. At any rate go on reading the MANUFACTURERS' RECORD, and when you write to its advertisers, as thousands are doing, don't fail to say "I saw your advertisement in the MANUFACTURERS' RECORD."

Messrs. Charles C. Adams & Co., Empire Building, Salisbury, N. C., write to the MANUFACTURERS' RECORD:

The more we read your great paper, the more we are impressed with the great work it is doing for the South.

ENDOWED FOR WHAT?

Who gave for the completion of the Carnegie-Rockefeller endowment of the University of Virginia the \$150,000 procured during the visit of President Alderman to New York? The visit occurred between the first mutterings of indignation at the award of the prize for the "noo Sawth" interpretation of treason and of other incidents of American history and the date of the announcement that the million-dollar endowment had been completed. The question of origin of the \$150,000 and of the \$100,000 raised last November is natural to students of this endowment movement. That was under way at a time when the New York Tribune stated that the chief significance of the selection of the first president of the university was that it linked "the University of Virginia, with all its traditions and its powerful influ-

ence on Southern thought, with the movement for the democratization of education." In Virginia the opinion was held that it was something in the president's favor that he was "thoroughly identified with prominent educators and men of means of the North who are interested in Southern education," and the hope was expressed that it would "be able to attract donations which will give this institution an endowment that will place it on a footing of equality with similar institutions in other States." Upon the alumni movement, about the only safe movement to lead in these days in an endowment of an institution of learning, was shortly grafted one with an array of great names, some of them identified with ideals hardly in harmony with what the University of Virginia had stood for and should continue to stand for. An offer by Andrew Carnegie of \$500,000 on condition that another half million should be raised was followed by gifts of \$100,000 from John D. Rockefeller, of \$9000 from his \$43,000,000 General Education Board, of \$10,000 from the treasurer of that Board and of \$1000 from another member of that Board, making a total of \$620,000 representing directly the "movement for the democratization of education" in the South in the total \$809,212 of the endowment available in November, 1907. Of the \$189,000 difference between the total fund at that time and the \$620,000 of the democratization money, a grandson of Thomas Jefferson gave \$50,000, the wife of a leader in the expanded movement gave \$20,000, and Mr. Joseph Bryan gave \$10,276, while by and through Mr. Charles Steele, one of J. Pierpont Morgan's associates, came \$50,000 more. The remaining \$50,000 came from 18 named persons and others unnamed. How many persons and who were interested in the \$100,000 given last November and the \$150,000 procured in the midst of the exceedingly acute situation of January-February? Will the details be given publicity equal to that given the original gifts?

But there is another pressing question. Can the announcement of the completion of the million-dollar endowment of the University of Virginia aid "literary merit and structural quality" in giving in a historical "prize essay" a shadow of truth to the statement in the essay that in 1861 "intellectually the South was practically dead. Most of the people were densely ignorant?" Furthermore, does the democratization of education in the South mean that that essay judgment is to prevail in the interpretation of history with which the South is to be dosed?

THE COTTON MOVEMENT.

In his report for February 26 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during 179 days of the present season was 11,006,974 bales, an increase over the same period last season of 1,973,688 bales. The exports were 6,421,574 bales, an increase of 645,035 bales. The takings were, by Northern spinners, 1,969,737 bales, an increase of 832,959 bales; by Southern spinners, 1,445,128 bales, an increase of 52,723 bales.

CHARLESTON.

Good work for the people of Charleston, S. C., has been done in the artistic pamphlet just published by the Chamber of Commerce, the Manufacturers, Jobbers and Bankers' Association and the municipal government of that city. The pamphlet is designed to set forth by means of salient facts and statistics the resources of Charleston and its opportunities for manufacturing and commerce. Among the facts are: \$3500 a day to be paid in wages at the \$15,000,000 navy-yard when completed, annual shipments of 400,000

tons of fertilizer, more than 100,000,000 feet of lumber sawed a year, neighborhood truck crops aggregating in value \$3,317,000 a year, \$3,000,000 annual sales of lime and cement, miscellaneous industries, two of them employing more than 1000 persons each; more than \$16,000,000 in bank resources, a harbor with 27 feet of water in the shallowest place at low tide and 32 feet at full tide, abundant water supply, low insurance loss, ideal climate, moderate cost of living and exceptional educational facilities.

SIX STAGES.

FIRST.

A reference to the MANUFACTURERS' RECORD in literature descriptive of the Carolina Trucking Development Co. of Wilmington, in regard to trucking lands in Eastern Carolina.

SECOND.

A letter written on train No. 10, Chicago, New York and Boston Special, February 19, by Mr. George E. Danforth to the MANUFACTURERS' RECORD asking if the Carolina Trucking Development Co., whose advertisement or circular he had read dated 1907, "is still in business, and if they are O. K." Mr. Danforth said that he was on his way to New York to sail for Florida, but that if we advised him by return mail that the company was still operating he would change his route and go to Wilmington and look up the matter.

THIRD.

On February 20 Mr. Danforth was advised that the company was still in existence engaged in colonization and development of trucking lands near Wilmington.

FOURTH.

March 1 Mr. Danforth came into MANUFACTURERS' RECORD office, made himself known, and stated that our letter having reached him in time he changed his route, went to Wilmington instead of to Florida, where he had been bound for a holiday trip, bought several tracts of land from the company and immediately returned North in order to arrange for buying a number of portable houses to be located on the tracts purchased, with a view to settling them with farmers from the West. He also reported that he has bought for the same purpose land in the Pecos Valley district of Texas, in the Ozark district of Missouri, is interested in the Florida situation, and has now become interested in what he has seen in North Carolina. Mr. Danforth, whose home is at Orchard Park, Erie county, New York, reports himself as a dairy farmer, but seeing certainty of great advance in land values and the opportunity for investment in well-selected lands in the South, even when in small tracts, and their resale after improvement to Northern and Western farmers, is giving much time to such investments.

FIFTH.

MANUFACTURERS' RECORD:

Enter on subscription list George E. Danforth, Orchard Park, Erie county, New York, for one year from March 4.

SIXTH.

Moral too plain to need elaboration.

ASTRONOMICAL.

Through the complaisance of such lesser lights as the Austrian ambassador, intrepid wolf-hunters, jovial world-renowned and world-embracing journalists and cloud-compelling statesmen of the racquet regime, it was made possible for two suns unabashed to shine simultaneously and at one and the same instant in the Washington firmament this week for the first time in American history.

CORRECTION.

By inadvertence the MANUFACTURERS' RECORD stated last week that the headquarters of the Pee Dee Trust Co. would be at Florence, Ala., instead of Florence, S. C.

IRRIGATION TRANSFORMING SOUTHWEST TEXAS.

[Special Correspondence Manufacturers' Record.]

Brownsville, Texas, February 19.

Southwest Texas is a veritable storm-center of irrigation projects, agricultural and horticultural enterprises, railroad construction and townsite development.

Something is known generally about the great activities of this irrigable section of the lower Rio Grande Valley, but investigations made on the spot demonstrate that not even the people who are here themselves, and having a part in the remarkable work, are aware of the enormous extent of the developments under way.

To one who is familiar with what has occurred in Southern California it would appear that here is in progress a transformation that will duplicate, if not exceed, the achievements in Los Angeles and around.

Based on the best information then available, I wrote for the January 7 issue of the MANUFACTURERS' RECORD a statement that there are 27 irrigation and land companies operating in the lower Rio Grande Valley, and that they have investments aggregating \$2,000,000. I discover that the people at work here have been too busy with their own affairs to find out just what their neighbors are up to. As a matter of fact, there are 34 land and irrigation companies operating in the district between Mission and Point Isabel, all strictly within the irrigation belt, and their investments in land, irrigation plants, townsites and sugar mills will foot up a total of more than \$14,250,000. These 34 companies represent an ownership of over 430,000 acres of land, and so actively have operations been conducted within the past few years that about 135,000 acres have water on them today, and are in stages of cultivation ranging between recent clearings of mesquite and cactus and the production of record-breaking crops of cane, alfalfa and truck.

Newcomers are here from every part of the United States, and from Canada, British Columbia, Nova Scotia, Germany and elsewhere, and it is notable that the most enthusiastic of them are those who have had experience with irrigation projects and fruit and truck growing in the best portions of the irrigable districts of the West. They know the possibilities that irrigation presents, and whether as promoters of enterprises or purchasers of lands, they take hold in the most enthusiastic way. Land with water on it at \$100 an acre is taken by them without the batting of an eye, even though this same land might have been purchased not over five years ago for 50 cents or \$1.

It is the character of the people who are coming in here that forms the most significant feature of the situation. They are not the ragged and penniless pioneers who usually compose the vanguard of the developers of communities in general. These people are successes where they are at home; they have money in bank, and the crowds who come in here are likely to bring an automobile along with their trunks. In the Saratogas of their women folks are gowns and hats of the latest mode, and all the grotesque pasters that are accumulated by the traveler to foreign parts are likely to be found on the grips of the chappies and their sisters who drop down here for a visit or a stay. It is easy to see that with such a population as a basis, with knowledge, experience and money the universal rule among those who form the ranks of the incomers, it will be possible to do more in five years' time here than would be required in a couple of generations where everything must proceed from elemental and primitive conditions.

In a trip I have just taken through the

country around Brownsville, along the Harlingen-Fordyce branch of the St. Louis, Brownsville & Mexico Railroad, and over lands adjacent thereto, I have seen much of the development work here under way; have met and talked with the people who are promoting the various enterprises, as well as those who are tilling the soil, and I am prepared to state that nowhere in the United States today is there a more interesting and important development going on, or one more likely to effect a complete transformation from a comparatively unoccupied and unproductive region to one of the most highly productive and thickly settled to be found anywhere.

There is a perfect avalanche of development, until it would seem inevitable that within ten years—possibly five—there will be a population of 500,000 people in this particular neck of the lower Rio Grande, with an annual crop production of fully \$100,000,000.

It is calculated that in the triangular-shaped tract, having its apex around Mission, 60 miles or so northwest of Brownsville, and having as its base a 30-mile stretch along the coast to the north of Brownsville, there are on the American side of the river 500,000 acres of the finest alluvial land outdoors, which have easily available a never-failing supply of irrigation water from the Rio Grande. All of this is adapted to sugar-cane, and it is considered likely that fully 400,000 acres will be utilized in this way. As much as 60 tons to the acre have been raised; 42 tons is regarded by some as a feasible average, and a 30-ton average has been demonstrated as a certainty in the case of one grower who has been operating in a small way for more than 30 years. Furthermore, the cane is very rich in sucrose; freezing weather is rare, so that the season is long (cane sometimes goes to seed here, which it never does in Louisiana), and replantings are required no oftener than once every five to seven years.

Cane is looked on as the great staple for the district, but about everything else that grows in a semi-tropical region is considered feasible for this portion of the valley. Alfalfa is particularly a profitable crop, as from 8 to 10 cuttings, of a ton to the cutting, have been obtained, and alfalfa sells here at \$15 to \$20 a ton, with a demand so great that trainloads of it are shipped in from the Northwest.

Cabbage matures here several weeks earlier than in other places, several car-loads of them having already this year been shipped out. Some men have realized

a profit of over \$400 an acre on early cabbages, and all along the line, in roasting ears, beans, tomatoes, Bermuda onions, potatoes, cucumbers, eggplant, cauliflower, etc., the prolific production, the certainty of the crop under irrigation and the fact that they get into the market ahead of all others and bring fancy prices make truck-growing an exceedingly alluring occupation.

This is declared to be a section adapted to all kinds of citrus fruits, and orchards of oranges, lemons and grape fruit are being extensively planted. Pecans, English walnuts and other nuts, as well as bananas and dates, are also considered feasible and profitable commercial products, and grapes are expected to thrive as they do in California.

Cotton grows in perfection here, but with other crops producing from \$200 to over \$1000 an acre it is not likely that a very extensive cultivation of cotton will be indulged in in the irrigation district.

Of such importance is the development here conceded to be that the Government

has established an agricultural station, utilizing a portion of the abandoned Fort Brown grounds for the purpose. Here experimentation will be carried on in a wide variety of soil products. Nearly 2000 varieties of plants and shrubs are already in the ground. There are 107 varieties of cotton, 297 grapevines and 200 different kinds of cactus, including a practically spineless variety which the Government has imported from Italy.

Before the St. Louis, Brownsville & Mexico Railroad was built into this country, a little over four years ago, the whole aspect was a forbidding waste of mesquite and cactus, cleared lands being practically unknown, except on occasion along the river banks, and in all the territory now penetrated by the railroad there were not more than five farm houses when the road was begun. Now no fairer view of pleasure, smiling acres can be found than those to be seen from the car window at frequent intervals throughout all the irrigated belt.

Here is destined to be a marvelously wealthy region, with the small farmer as the rule, and thriving towns and beautiful homes and great hotels abounding, as in Southern California.

This will be a playground for the people of the Middle North and West. Brownsville will add the comforts and conveniences of modern civilization to the charm she now owns as a link with the long since passed.

The Intercoastal Canal will be built from New Orleans to Brownsville some day. There will be many railroads built into this section, some of them already in a formative state, and with bridges across the Rio Grande, certain soon to come, Brownsville's importance and size will be greatly augmented through becoming the American border city, the first metropolis at hand, to which will be tributary the vast development that is certain to spread along the Mexican coast from Matamoras to Tampico at no distant day.

There is development all over Texas, and it would require volumes to present the picture completely and in detail. A chapter may be written on the remarkable activity in railroad propositions. The artesian belt country is worthy a story of its own. The way Texas onions have knocked the Bermuda out of the market is an interesting sidelight on the development at hand. The iron ores, the coal and the lignite—all these and almost countless others call for special treatment in detail. All is interesting, but in nothing is the transformation greater than in the substitution of crops worth hundreds of dollars an acre for mesquite and cactus, and this story is herewith given in considerable detail.

The pioneer in the sugar-growing industry on the American side of the Rio Grande is the Brulay sugar plantation, located in the valley about seven miles from Brownsville, which has been in constant operation for 33 years. Although not an extensive operation, there being only 400 acres in the plantation in cultivation, yet the results of the efforts here have been a constant proof of the adaptability of the lower Rio Grande Valley to a high success in sugar-growing. The Brulay plantation is still in the hands of the Brulay family, Mr. Louis Brulay being the present head of the enterprise. A sugar mill of 125 tons daily capacity has been operated from the beginning, and the enterprise has been uniformly successful. The lands of the plantation are irrigated by water from the Rio Grande, and year in and year out during the time the plantation has been under cultivation, and the average yield of cane has been 30 tons per acre.

The most extensive sugar enterprise in the valley is the plantation and mill of the Ohio & Texas Sugar Co. This organization is composed entirely of Columbus

(Ohio) people, who own 2000 acres of land south of Brownsville, and have put about 1400 acres in cane. Going into the territory two years ago, the company organized with \$1,500,000 capital and purchased the P. E. Blalack plantation and began construction of an up-to-date sugar mill. The first unit of the mill has just been completed. It will be added to as the supply of raw material is increased, so that the mill will have a capacity of 2500 tons of cane per day, which will make it the largest as well as the most up to date in the United States. The mill itself when completed will have cost \$1,000,000. The mill and entire plant was designed by A. F. Delbert, an engineer of New Orleans, who is a recognized expert in his line. The president and treasurer of the company is F. H. Lindenberg, formerly a manufacturer of Columbus, Ohio. R. C. Wharton, also of Columbus, is the secretary. It is significant that these people were unacquainted with the sugar industry until they were attracted by the possibilities here and began making investments a few years ago. They are satisfied that the tonnage per acre of cane in the Rio Grande Valley can be made to average the tonnage grown in the Hawaiian Islands, which is stated to be 42 tons to the acre. It is the estimate of the company that 400,000 acres of land on the American side of the Rio Grande are adapted to sugar-raising, and it is thus the expectation of the company that opportunities for a large development of the enterprise are to be found in the situation here.

Two and one-half miles below Brownsville Clement R. Kirby of New Orleans owns a 400-acre tract, which is irrigated by a private plant, and which is practically all in cultivation in sugar. Mr. Kirby was formerly an actor, and has made an investment of about \$40,000 in this enterprise.

The first land and irrigation company of any consequence to be organized in the Brownsville district was the Brownsville Land & Irrigation Co., and 20,000 acres of land around Brownsville were included in the holdings of the company, which began operations in 1901. Employes and officers of the McCormick Harvester Machine Co. were the original investors in the enterprise. About 50 miles of irrigating canals were constructed, and land was cut up and sold in farm lots until about 12,000 acres had been disposed of. In the latter part of 1907 the Heywoods, Lon C. Hill, Sam Robertson and other Texans, and also Northern and Eastern capitalists, became owners of the remaining 8000 acres. The property is still being marketed to purchasers intending to cultivate, and the entire tract is in a forward state of development.

The Brownsville Land & Improvement Co. has a large acreage addition to the town of Brownsville, which is being cut up for town lots, truck farms and suburban tracts; altogether 2600 acres are involved in the holdings of this company. Those who have made investments in the stock of this company are not only local people, but are from California, Kansas and elsewhere. It is the expectation that the town property of the company known as West Brownsville will be built up as an important development of Brownsville proper. A considerable amount of money is being spent, providing water, sewers, sidewalks and street building.

Toward the Gulf from Brownsville is the enterprise of the Laguna Vista Club. The company owns 10,500 acres of land, including 2200 acres of a townsite on Laguna Madre, near Point Isabel. The ownership of the company is represented in 110 shares of \$1000 each, which have all been sold to individuals scattered between Brownsville and New York city. A de-

velopment embracing various kinds of agricultural enterprises, as well as the building of a town on a very slightly location by the sea, are included in the propositions of the company. A canal and a railroad are also proposed in connection with the work of development. The officers are T. H. Hallam, president; J. W. Davis, first vice-president; R. L. Stell, second vice-president; S. P. Morris, treasurer, and H. H. Bunker, secretary, all of Brownsville.

Near Brownsville is the Piper plantation, a private enterprise of Piper Bros. of Racine, Wis., who are among the heaviest cabbage producers and handlers in the United States. They have in this plantation a tract of 2700 acres, all of which is in sugar-cane. The lands are watered by private irrigation canals. As this property adjoins the Brulay plantation, the cane raised is sold to the Brulay people. Something like \$400,000 is represented in these developments.

In this neighborhood is also the enterprise of the Indiana Co-operative Canal Co. This company is composed principally of Indiana people, and 12,000 acres of land now being watered by canals of the company are also occupied by Indiana people. The canals of this company can be extended so as to serve 25,000 acres. The lands served by this company have been sold to farmers at from \$65 to \$100 per acre.

A private enterprise in the Brownsville district is the 300-acre development of C. Garza. His ownership consists of 300 acres, largely in sugar-cane, and is irrigated with a private plant.

In this vicinity is the property served by the Olmita Canal Co. The principal owners are L. F. Beat and J. L. Parker of Kinsley, Kans., and D. P. Gay of Olmita, Texas. This is an ownership of 2600 acres, and when the irrigating canals are finished an investment of \$150,000 will be represented. There is a good portion of this land in cultivation now in cotton and truck. It is reported that one man who planted 27 acres of cotton on the 15th day of last May made 34 bales; also that a car of cabbage per acre has been grown on this property.

An illustration of private enterprise located alongside of very extensive undertakings is furnished in the case of Batts & Hinkley, who came from Wisconsin some years ago and built one of the first canals in the valley in 1904 for the purpose of irrigating 1000 acres of land which they had purchased for cultivation. None of this tract of land has been offered for sale, but it is said that the purpose of the owner is to retain it and cultivate it largely in sugar.

One of the most important enterprises in the valley is that of the San Benito Land & Water Co., an organization of which Alba Heywood is president and general manager, S. A. Robertson is secretary and chief engineer, and which owns 50,000 acres of land on the Louisville, Brownsville & Mexico Railroad north of the river, the town of San Benito being 19 miles distant from Brownsville.

By utilizing some old resacas the water from the Rio Grande is secured by gravity, and the entire tract is irrigated in an economical and effective manner. The company has been in operation for some years, and a large number of tracts of from 10 to 160 acres have been sold to farmers and investors from all parts of the United States. Something like one-third of the holdings of the company have thus passed into the hands of investors and farmers at prices ranging from \$40 to \$200 per acre.

Corn, cotton, cane and truck and citrus fruits are crops mainly grown on these, as well as lands generally in the valley.

At Harlingen, 25 miles above Brownsville, where the Harlingen-Fordyce branch of the Brownsville road begins, are headquarters for the Harlingen Land & Water Co., of which company the picturesque and successful Lon C. Hill is president and principal owner. In this property there are 40,000 acres, which are served by 30 miles of main canals and main laterals, practically all of which have been finished. Lands are being sold in tracts of from 20 acres to 1000; mostly, however, in tracts of from 40 to 160 acres; 12,000 acres have thus been sold at prices varying from \$40 to \$115 per acre, the purchasers not only being Texas people, but incomers from Colorado, California and the West, and from the North and East generally, as is the case in other developments in this section.

A great deal of sugar-cane will be grown in cultivating the lands here. The value of lands, canals, etc., represented in the initial investment in this enterprise represents a financial proposition of something like \$1,500,000. As developments proceed this sum will be considerably added to.

On the line of Harlingen-Fordyce branch there are a large number of developments, ranging from a few acres to more than 100,000. One of the first in order is La Gloria Canal, near Santa Maria, where 3000 acres of land are served with canals and laterals. There are 1000 acres in cultivation, mostly in garden truck at present, but upon which considerable sugar-cane will be grown. The property has all been sold in tracts of from 40 to 160 acres to Northern and Eastern people at from \$40 to \$75 an acre. The officers of the canal company are C. E. Hammond, president, of Illinois; C. W. Zelie, vice-president, of Appleton, Wis.; W. H. Bloomer, secretary, of Milwaukee, Wis.

At Santa Maria is the Santa Maria Irrigation Co., an enterprise which was organized some four years ago. Starting in a small way, with 100 acres in cultivation, there are now some 1500 acres under cultivation, which will be increased to 4000, the total holding of these interests. There are two pumping plants, with a total capacity of 35,000 gallons a minute. The lands have been sold for as much as \$100 an acre, mostly in 50 to 100-acre tracts, and are largely owned by Northern farmers. With the exception of Judge E. C. Forto of Brownsville, the development represents Northern capital. J. P. Jones of Paul Jones & Co., St. Louis, is the president.

At Santa Maria there is the development of the La Feria Mutual Canal Co., which has been established by St. Louis and Minneapolis people. Sixteen miles of canal have been undertaken, which will water approximately 9000 acres of land. Land has been cut up into tracts and is being sold to people from the outside. In this development something like \$250,000 represents the original investment.

Near Santa Maria are the operations of the Minnesota-Texas Land & Irrigating Co. Eleven miles of main canal have been constructed and 5600 acres are to be served. Land has been sold at from \$50 to \$125 an acre, some 50 tracts of 40 acres each having been already disposed of to Texas, St. Louis, Minnesota, Montana, Dakota and Wisconsin purchasers. 320 acres are being reserved for a townsite. The chief owners in this enterprise are S. Schnorenberg of Minnesota and Fifield Bros. of Minneapolis. Minneapolis money has been utilized in this development.

Altogether, the most significant development in the valley up to date is that of the American Rio Grande Land & Irrigation Co. This is an enterprise represented almost exclusively by St. Louis capital. The company is organized with \$3,000,000 capital, and already over \$2,000,

000 has been spent in irrigation enterprises, buildings, and in the preparation of the property for development.

The company owns 110,000 acres of land in Hidalgo county, and now waters 20,000 acres; \$1,000,000 will be expended to extend the canals for the development of the entire tract. So far 18 miles of main canals have been constructed, 125 feet wide from the centers of banks and 18 feet deep and 60 miles of laterals 30 feet wide, 3 feet deep. Included in the development is the town of Mercedes, now two years old, and which has a population of 1500 people. Every feature of the development is of the highest class. The company has constructed handsome public buildings, including a \$25,000 hotel, which is one of the best in this part of Texas; company office buildings, a schoolhouse, bank, etc., all of brick, and of the best modern construction. The canals are solidly and substantially built, with gatelocks, dams and bridges of reinforced concrete and for carrying conduits across the laguna four inverted siphons 600 feet long and 6 feet in diameter have been built of reinforced concrete.

The population of the place is composed of the finest class of people from Colorado, California and elsewhere, who are accustomed to irrigation propositions, and every feature of the development is the best of its kind to be found anywhere. It is stated that this is the biggest private irrigation ditch in the United States. The land was bought four years ago, and the company has spent three years in developing the proposition. The officers of the company are W. S. Chaplin, president; C. L. Carter, secretary, and Thomas West, Jr., treasurer, all of St. Louis.

Until last fall S. P. Silver was general manager, and, together with Mr. Carter, he visited Idaho, Nevada, California and Colorado for a thorough study of all the irrigation developments there owned by private individuals and by the Government, and the work at Mercedes was carried out in accordance with the information obtained in this extensive investigation. The land has been sold to individuals from every State in the Union, and from parts of Canada in tracts of 40 acres up to 160 acres. Sales were begun at \$25 an acre, and then were advanced to \$50, \$60 and \$100, and the average will be about \$75 for the balance.

The land is being planted in sugar-cane, citrus fruit, grapes and truck. Here, as elsewhere throughout the valley, it is figured that cane will be the staple crop of the section. Within five years it is calculated that 10 sugar mills will be in operation, and in time that there will be as many as in Louisiana. The next staple crop will be alfalfa, and the land is found to be well adapted to all kinds of truck, melons, grapes and citrus fruit.

Further up is the Llano Grande plantation, developed by J. P. Withers of Kansas City, and just sold to A. S. Adams of Corinth, Miss., for \$300,000. It consists of 10,000 acres of land, three or four miles of canals, and pumping plant, and the homestead. It is the intention of the purchaser to develop the tract further, and sugar planting will be largely engaged in.

Between the Llano Grande plantation and the La Donna there are six private plantations, covering about 2000 acres. In all, there is represented an investment of about \$200,000. The lands in these enterprises are mostly devoted to trucking and cotton.

The La Donna tract, near Donna Station, 23 miles west of Harlingen, consists of 8700 acres. The La Donna Canal Co. is building canals, which have been completed for the first lift, and all the laterals have been provided for the watering of 5000 acres. The canal from the second

lift to the railroad will be completed within 30 days. So far 2500 acres have been sold in tracts of from 5 to 40 acres each at an average of \$50 an acre, some of the smaller tracts selling at from \$75 to \$100. The company has reserved 2000 acres for a sugar plantation, and machinery has been bought for a sugar mill. Work has been commenced on the mill, which will be of 1000 tons daily capacity to start with, and so built that it can be enlarged as necessity requires. Pittsburg and Cleveland money is largely represented in the syndicate, and land speculation has come as an after-thought. Sugar-growing was the primary object of the company, and it is expected that sugar production will be largely engaged in by those who have bought tracts of land from the company. It is calculated that an investment of over \$500,000 will be represented in the sugar mill and canal, the canal alone calling for an expenditure of \$250,000. Alfalfa will naturally be extensively raised on the lands of the syndicate, and already there have been very successful efforts made in truck-raising. On one acre of land there were 1020 crates of onions raised last year, which sold at 90 cents to \$1.10 f. o. b. Donna, and there has been an average of over 500 crates to the acre raised in the section. The officers of the company are J. C. McDowell, Pittsburg, Pa., president; A. M. Snyder, Cleveland, Ohio, treasurer; L. A. Smart, formerly of Cleveland, now of Donna, manager. The Hallam Colonization Co. of Brownsville is sales agent.

Adjoining the Donna plantation is the private enterprise of John L. Box, who has 1000 acres, with an irrigation plant, which is being cultivated for farming, truck and garden purposes, and which represent an investment of something like \$50,000.

At San Juan C. E. Hammond and J. C. Kelly have something over 17,000 acres, for which they are building canals to water the tract, which is to be subdivided as may be required in tracts of 10 acres up. Plans as formed contemplate an investment here of something like \$500,000.

One of the most interesting developments in this section is that of the San Juan sugar plantation, containing 7000 acres, and originally owned by John Closner, a former Minnesota man, who was one of the earlier developers outside of the Mexicans in the Rio Grande Valley. Mr. Closner worked up the San Juan sugar plantation and established the fact that lands in this vicinity are well adapted to sugar-growing, the planters using the same cane that is raised in Louisiana. Mr. Closner built a sugar mill with 250 tons daily capacity seven years ago. The mill is still turning out yellow clarified ("Y. C."), and has always been able to market its products right at the plantation, the sugar never having been shipped further than Brownsville. The plantation is now owned by a syndicate of Colorado people, at the head of whom is Dr. A. W. Roth, formerly a sugar-beet grower of Colorado. With him are F. G. Gregory and Dr. J. W. Skinner, all of whom are recently of Fort Collins, Col. This development represents an investment of about \$300,000. It is proposed to grow sugar-cane and alfalfa exclusively. The company has 600 acres in cane and 160 in alfalfa. The mill has been increased to a 450-ton capacity, and a 1000-ton mill will be erected as soon as the acreage of cane justifies the increase. A portion of the tract will be sold in parcels of 40 acres up.

In this vicinity Dr. W. S. Dougherty of New York city is developing a 5000-acre tract, which is not on the market yet, and which is not largely in cultivation. Work on an irrigation plant is being prosecuted, however, and a sugar mill will be put in and the entire tract developed as an

investment. An expenditure of some \$125,000 is involved.

Adjoining Dr. Dougherty's land is a tract of 4000 acres recently acquired by Park & Holmes of Boulder, Col. This company is surveying land and getting things in shape for development. The plan will probably be to develop and sell in small tracts. The company expects to retain a portion for itself to plant in cane, alfalfa and truck.

Nearby and adjoining the station of McAllen on the east is a holding of 8000 acres, owned by Steele & Pershing of Oklahoma City. This firm only started last December, but plans contemplate the construction of a 14-mile canal, with laterals sufficient to develop the entire property. Already a number of outsiders have been interested in the enterprise, and contracts for the sale of 3600 acres to people from all over the country have been made. On one trip to the property Mr. Pershing brought 34 people from Canada. The company expects to develop a sugar plantation for itself later on. It is stated that from \$250,000 to \$300,000 is represented in this enterprise.

At McAllen the Hidalgo Canal Co. interests have an acreage of 27,000, 10,000 of which are under ditch and 4000 acres will be in cultivation this spring—400 cane, 400 alfalfa, 200 in cabbage, 100 Irish potatoes, 100 in onions, 100 in oranges, 100 in figs and the balance in miscellaneous crops, such as beans, cantaloupes, corn, etc. The officers of this company are D. R. Swift, president, and William Briggs, secretary and treasurer. These gentlemen are recently from Lake Charles, La., and have been operating in the valley for some years, although the present development has largely taken place within the past 12 months. Lands have been sold to about 250 people from all parts of the United States, all of whom are improving the property purchased. The prices range from \$90 to \$150 an acre, including an interest in the canal, which is deeded to the landowners. There are 14 miles of main canal and 11 of laterals to the south and 6 to the north. In the townsite there are 350 acres and a considerable settlement. Something like \$400,000 is represented in the investment, \$125,000 of which was required for the canal. It is proposed that there shall be a considerable sugar development here, and a sugar mill is contemplated. There is talk also of a fig-preserving plant and a plant to manufacture sauerkraut.

At Hidalgo is the pumping plant of the Rio Bravo Canal Co., of which enterprise C. S. Morton and C. E. Hammond are personal owners. The pumping plant was completed in September, and there is now water on every 40 of the 1000 acres in cultivation. The entire tract consists of 4000 acres, and was bought in February, 1908. About 1500 acres have been sold, and the balance is in the market now in blocks of 40 to 80 to 120 acres each. Sugar-cane, alfalfa and farm truck are the general crops.

At the town of Mission, Conway & Hoit are developing 27,000 acres in an almost sensational way. It is in this tract that William J. Bryan has acquired 120 acres of land, and other recent purchasers have been B. F. Yoakum, B. L. Winchell and other well-known railroad men. Conway & Hoit are Minnesota land men and they have injected a vast amount of enterprise into their work here. The property occupies very slightly location, gently rolling from the second and third benches down to the Rio Grande and affording a site for a city above the railroad which is unsurpassed in this generally level country. The main body of this land was purchased by Conway & Hoit just two years ago. They began surveying for a canal March 1, 1907,

and even before the deal for the land had been closed some of the land had been sold. The canal construction was commenced in August, 1907, and by December of that year the water was in the ditches. A few months later a pump with a capacity of 36,000 gallons per minute was installed, which was sufficient to irrigate from 8000 to 10,000 acres of land. Up to date about 8000 acres of the tract have been sold, at an average price of \$60 an acre. The price on the remaining land will average \$100 an acre. Over 11,000 ownerships are represented in the purchasers, and they have come from places as widely separate as Mexico City and Munich, Alaska and Florida. An investment of \$450,000 in this property has already been made by the original owners, and further improvements contemplated include a centrifugal pumping plant of 350 horse-power.

After disposing of his interest in the San Juan sugar plantation Mr. Closner bought 20,000 acres of land in Hidalgo county north of San Juan Station from the Texas Mexican Railroad Co. Starting out four months ago, Mr. Closner and those whom he had associated with him began the development of this property in the most vigorous fashion. The lands were covered with mesquite and cactus, and no development of any kind had been made. Fourteen hundred acres of a townsite were laid off, and it was proposed to establish the seat of the county at this new town, which was named Chapin. An order for an election on the proposition was secured, and in the least possible legal time the proposition carried, moving the county-seat from the town of Hidalgo, so that on October 12 Chapin was declared the new county-seat of Hidalgo county and the county officers were in charge of the offices in the new county-seat. Chapin now consists of a place of about 400 inhabitants, and the owners and promoters have shown their faith by moving their families and building homes there. Members of the company have also undertaken the construction of a railroad, grading has been done, tracklaying is under way, and the road will be in operation between San Juan Junction and Chapin within a few days. The contract has been let for 25 miles of road, which will take it from San Juan to Laramie: from this point, which is the town of the 135,000-acre ranch of W. F. Sprague, the road may be extended to Falfurias. Local home money has so far been used in the development of this enterprise, but outside capital will probably be secured for the extension of the line on north either to San Antonio or to some line which will give a connection with Fort Worth. Including the construction of 25 miles of railroad, the present investment in this enterprise foots up about \$500,000. The officers of the company are: President and treasurer, John Closner; secretary, D. P. Chapin, with W. F. Sprague, La Comma, and J. M. Johnson, Sr., a former St. Louis man, and now president of the Hidalgo County Bank, as principal additional stockholders.

This section expects to be the beneficiary of the proposed Gravity Canal, which will start just below Rio Grande City, and, paralleling the Rio Grande River for about 20 miles, one branch would fork running down the river front and the other would flow along the elevation of second bench land to a point near the Cameron county line: this would give a total length of about 100 miles, and would water by gravity under present proposed plans about 300,000 acres of land. The expenditure of the enterprise will represent about \$1,500,000, which will be borne by the property-owners. It is considered very likely that this enterprise will be successfully carried out, in which event a considerable

additional acreage of Rio Grande Valley land will be brought into the irrigable district.

Between Chapin and La Comma is a development of 5500 acres of land undertaken by the Citrus Fruit Development Co. of Brownsville, with capitalization of \$32,000 and a private investment of \$47,000. Here will be a town called Allendale, on a site of 160 acres, and there will be subdivisions of 10, 20, 40 and 100-acre tracts. Citrus fruits, oranges, lemons, grapefruit, grapes, pecans and fruit generally will be grown. The company has ordered trees for 200 acres of pecans. Without waiting for the gravity canal the company will put down wells, as this is in the artesian belt. The people interested in the enterprise are Chicago, San Antonio and Brownsville men. The officers are Judge Noah Allen, president; J. W. Davis, vice-president; H. H. Bunker, secretary and treasurer, all of Brownsville.

With the construction of the gravity canal a considerable portion of the La Comma Ranch would come into the market for developing purposes. This tract of 135,000 acres is individually owned by W. E. Sprague, who came from Rhode Island in 1879 and acquired his large holding when lands were cheap. Outside of 300 acres in cultivation, the entire holding is

used for ranch purposes. Water for farm and stock use is now secured from artesian wells. While a considerable part of the tract will continue to be used for ranch purposes indefinitely, now that the railroad is under construction to this ranch, a portion of it will be put on the market whether the gravity canal is completed or not. Should the gravity canal be built it would serve some 40,000 acres of the tract, and that much would probably be cut up and sold to small owners. This is in the district of the big ranches. In this locality is the King ranch of 1,250,000 acres, the Kennedy ranch of 500,000 acres, Jones of 250,000 acres and Lasater of over 250,000 acres. With the construction of a railroad and the introduction of irrigation large inroads will be made on these enormous holdings. With land selling from \$30 to \$50 an acre where irrigation is possible, the ranch men will feel it impossible to withstand the pressure to realize on their enormous investments, and while these large acreages will not be completely broken up for many years to come, yet the inevitable trend of development is toward the occupancy of these lands by smaller farmers, and there will be a transfer of the big ranch holdings to the cheaper lands across the border in Old Mexico.

ALBERT PHENIS.

Growth of Communities as Affected by Corporations.

By GEORGE H. DAVIS.

[Written for the Manufacturers' Record.]

The trend of each civilization in its development has been toward consolidation, which politically has resulted in bringing the human race under one or two governments, as, for example, the Roman Empire at the time of Augustus. In the fall of the Augustan civilization all large units, political, defensive and industrial, were shattered and the feudal system of medieval times, with all its poverty and barrenness, resulted.

Our civilization differs from others only in its industrial complexity and engineering accomplishments. The agricultural, mining, manufacturing, mercantile and transportation organizations of the world are many of them far greater measured by the amount of business they transact than the political organizations or governments. This is as it should be, the whole object of government being simply to guarantee individual or corporate liberty and protect individual or corporate effort. After accomplishing this, the less the significance of the government and the greater that of the industry, the greater the nation. Too much government becomes the Old Man of the Sea to the whole fabric of material progress.

Large organization units and civilization are inseparable. If the great corporations are destroyed, present nations and our present civilization will disappear with them. As their progress is checked through unnecessary regulation or oppression, so will the progress of humanity be checked.

Modern business cannot be conducted by individual wealth. Probably the richest man in the world could not individually pay for one double-track railroad from New York to San Francisco. This is only one-thirtieth of the mileage of the United States. Confederation and co-operation in industries and their financing is as necessary as is the confederation of States for protection and development. Corporations are merely confederations of individuals. Instead of such an association being soulless, as is commonly asserted, it is a summation of all individuality and is stronger, wiser and in some cases possibly better than any individual. Corporate or incorporate organization means monopoly

finally, whether such organization is for the manufacture and sale of gas, groceries, meat or electricity.

All individual or corporate businesses are for public service or public utility. Corporate businesses are authorized, created and protected by the State. Some of them have contracts with municipalities. Those whose business it is to produce, own or distribute water, food, clothes, living quarters and fuel, the basic necessities of existence, should first receive governmental regulation. As examples of these we have the agricultural trusts owning or controlling the most productive of the great wheat lands of the Northwest; the cattle ranches of the Rocky Mountain region; the coal and iron mines of the North and East, and the timber lands of the Northwest and South. In the cities we have the grocery, market and drug corporations and associations. None of them have ever received the slightest governmental regulation as to prices or rates for flour, meat, medicines or any of the other common basic products. It is true that the water companies have had their rates reduced by city councils, and such reduction confirmed by the courts. With all the great rivers and lakes of the world full of free water, it cannot be as far removed from the hands of the poor as food, clothes and shelter.

The class of corporations which we particularly wish to mention are those in urban life, the organizations connected with the conveniences; as examples may be mentioned hotels, restaurants, gas, electric, street transportation and water plants.

What part have these corporations had in building the cities? In the average municipality the street railway company pays into the public treasury, say, one-tenth of all the cash paid in direct taxes. This, in many cases, amounts to one-half of the company's surplus after paying for material, wages, damages and fixed charges. It means that it pays in taxes annually over 75 cents per capita, and that the city, before making any allowance for depreciation or emergency reserve or assuming any responsibility for these items, shares equally with the equity-holders.

Street railways greatly enhance the

other taxable values of cities. As an average example, assume that a company extends one of its lines a mile into undeveloped cow pastures adjacent to the city. This at once raises the price of 1000 acres of land from \$300 per acre to \$900, giving an increased assessable value of \$600,000 on land alone; with buildings, possibly a total of \$1,000,000, on which the State and city will receive annually \$15,000 in taxes. If this mile of track in two years after construction pays operating expenses, fixed charges, taxes and \$1000 as surplus for the owners, the average company would be satisfied. More than in any other industry expenditures in extension and equipment of street railways reflect value to all other material property of the community. It has been the universal experience that cities benefited by great expenditures in their transportation systems have been in every direction of business correspondingly extended.

Every time a city curtails the borrowing power of its street railway company \$1,000,000 it reduces its income in taxes alone by at least \$100,000 per annum. In the average city the street railway company pays for and maintains one-sixth of all the pavement within corporate limits. Allowing eight yards per capita, at \$3 per yard, this amounts to an expenditure by the company in a city of 100,000 of \$400,000. Upon this amount the company pays interest of 7 per cent., taxes 2 per cent. and maintenance 8 per cent., for which expenditure it receives practically nothing. This item amounts to 68 cents per capita per year. In addition, track and roadway construction suitable for pavement necessitates an expenditure over what is sufficient for car service equal to the pavement costs, upon which interest, taxes and maintenance as above must also be paid. This would amount to \$68,000 per year, or 68 cents per capita. The company carries, say, one-fourth of its passengers free, and it costs just as much to carry a transfer passenger as any other.

There are other forms of benefit either in cash or service, such as sprinkling streets, removal of snow and ice, free transportation of policemen and firemen and payment of court costs for pauper plaintiffs. In addition, there are damage payments in excess of just claims to the extent of possibly 50 cents per capita, or \$50,000, in a city of 100,000 population.

All businesses, whether conducted by individuals or corporations, should be regulated within such limits as will insure to these units of society all the freedom of action possible up to the point of preventing encroachment upon the rights of other individual or corporate units. If Government regulation is good in one industry, it is in all industries. Regulation, if at all, should be universal. It is unprofitable to a community to single out the street railway to bear the accumulated chastisement which should be shared by a thousand other businesses. The average city is beginning to thoroughly appreciate this, as indicated by the small hearing received by the would-be demagogues who fail to discern that that meal has been eaten.

The prosperity of a country or city depends entirely upon its treatment of invested money. Some countries of the Western Hemisphere bursting with natural wealth are now, in large part, howling wildernesses, and will be for generations to come, because no one with a dollar to invest even with a prospect of dividends of 100 per cent. per annum would chance its immediate confiscation. Bondholders want security and stockholders dividends. Both want their money back. If either is made uncertain, development stops. Exclusive of returns on borrowed capital, which should be approximately 5 per cent. per annum, agricultural, mining,

manufacturing and mercantile businesses should, and do yield, when efficiently operated, at least 15 per cent. per annum on the money invested by equity-holders. Ten per cent. of this is for the hazard, labor and responsibility of management, which fall entirely upon the stockholder. If a city regulates plants manufacturing and selling gas, electricity or other public conveniences through extortionate taxation or reduction of rates to a point of less profit than suggested, it will result in the paralysis of the industry to which such regulation is directed. This is simply an application of the law under which money flows in the course of least interference to the safest harbor. If any State or city has ambitions to be great, let it seize the present opportune moment and announce to the world a fixed policy toward investments for the next 50 years in which individual businesses and corporate businesses, private or public, are treated absolutely on a parity in regulation, taxation and the general exercise of police power or other necessary interference.

The fixing of rates of interest on loans by the various State governments is justified, and in its results, no doubt, protective and equitable. It merely establishes an average maximum price for the use of gold, an unvarying commodity. As a matter of fact, in legitimate commercial loans and settlement obligations the various rates established by law are rarely approached, the price of money set by ordinary demands of trade being nearly always below the legal limit. This is true in the case of all the corporation bond issues, as well as the mortgage notes and unsecured notes of small individual borrowers.

The lender's money is never accompanied by personal effort, natural individual ability or even sentiment. He sends nothing with his dollar and concerns himself only in initially determining the quality and extent of his security.

This is not true with the borrower or the stockholder. Every dollar owned or borrowed by him when put in a business is accompanied by his personality. The money is merely the equipment he uses. He may be, with the usual accompanying qualities, a fool or a genius; and, according as he is one or the other, he will fail or succeed.

It may be true in any given State or community that the average return to investors other than lenders is 6 per cent. per annum on investments. If so, it means that the inefficient, time-frittering equity-holder who loses 50 per cent. per annum on his investment has his returns averaged with those of the individual whose days are all too short and whose life concern has been business efficiency and maximum achievement. To establish such a rate and such a doctrine is to establish socialism.

The tendency of the immediate past has been toward a radicalism encouraging the immediate and often selfish and brutal execution of borrowed, undigested and unbalanced ideas. Possible confiscation has in many cases been only lightly considered. As has been said, we as a people run to the edge of the precipice and turn back. It should be said that we are fortunate enough to find someone there who, knowing its depths, turns us back. We find this force in our judiciary, backed by the conservative sentiment of the industrial classes.

Two recent decisions of the Supreme Court of the United States inspire confidence in corporate investment. A paragraph from the decision in the Knoxville water case is:

"Our social system rests largely upon sanctity of private property, and that State or community which seeks to invade it will soon discover the error in disaster

which follows. The slight gain to the consumer which he would obtain from a reduction in the rates charged by the public-service corporations is as nothing compared with his share in the ruin which would be brought about by denying to private property its just reward, thus unsettling values and destroying confidence."

In the same decision regarding regulation we find:

"It is a delicate and dangerous function and ought to be exercised with a keen sense of justice on the part of the regulated body, met by a frank disclosure on the part of the company to be regulated. The courts ought not to bear the whole burden of saving property from confiscation, though they will not be found wanting where the proof is clear. The Legislatures and subordinate bodies to whom the legislative power has been delegated ought to do their part."

Clear admonitions in this are: Stay away from court; settle your difficulties at home among your own people. Be frank; state your full case and demand your rights, whether you are the buyer or seller, regardless of what you are buying or selling, and you will be sustained.

We are trying to adjust the present surface turbulence. New men are also springing up who are locally and nationally turning the tide in another direction. The leader of the future will be the man who is first and finally the embodiment of justice. He will be intellectually unsurpassed and financially independent. He will come from the working class; will have experienced all the pangs of poverty, the struggles for recognition and the inspiration of wealth and independence. The wages he will receive will be the absolutely unanimous approval of those he represents. His power will not rest on his having led the mob in plundering the rich, nor in guiding the rich in sapping the life of the poor. He will take up the existing order and advance it as much as possible in his generation. He will believe in evolution and not revolution. In general, he will, to the extent of his ability, see that every person gets everything that is justly his. The day of the demagogue in this civilization is done. One-sided leaders have caused all the cataclysms of history. We want, and are going to get, balanced men into public life. The movement has started which will place in our City Councils, our Legislatures and the Congress of our nation individuals who possess the intelligence, strength of purpose and the sense of justice which will force complete approval from every man, woman and child thus represented. Vested rights of corporate or incorporate interests, whether of the rich or poor, have not in the whole life of our nation been in danger, and are not now. The outlook both in security and returns to labor and capital in any field was never brighter or more certain. Any thought or fear of racial or national degeneracy, even in its incipient stage, should be dismissed and forgotten. If nations are larger men, we have only passed Shakespeare's third age. The crest of our greatness is a thousand years ahead, and even if it were here, the Roman nation, with less to rely upon, was great for 30 generations after it had passed.

Menace in Free Iron Ore and Coal. Editor Manufacturers' Record:

It appears to me that it is now high time that not only the South, but all sections of this great country were moving to show our lawmakers in Congress that in their tariff revision they do not inflict an irreparable injury on the mining interest of this country. I refer especially to coal and iron ore, for you well know the cost of taking these important materials from the ground and putting them into

such condition as to admit of their use is labor and transportation.

Now, a few moments' reflection should show any disinterested person that the competition of foreign iron ore has to be met by that produced in the United States by American labor, and this competition must result in one of three things:

1st. The reduction of the cost of labor and rail transportation from mines to point of consumption to compete with foreign labor and water transportation.

2d. In order to reduce the cost of mining to meet this outside competition only those mines can be worked that are most favorably situated, and instead of a conservation of our natural resources the mines in many instances will be "hogged," as the miners term it, and not worked out as they should be, causing a loss forever to the nation of these natural resources that would be mined and worked out completely if prices would justify.

3d. This foreign competition, with water transportation, would close many mines, and might close nearly all of the iron-ore mines in many States, especially the small ones in New York, Pennsylvania, New Jersey, Virginia and Tennessee, and seriously affect those in Georgia and Alabama.

From some of the figures lately presented to a committee of Congress it would appear that duty should be retained on pig-iron and steel products to meet the increased cost of American labor, etc. If this is true in regard to steel, how much more does it apply to mining and the manufacture of pig-iron, where labor is the great item of cost and the protection afforded is small in comparison! For in iron-ore mining the labor cost alone will average almost three times the protection offered by a duty of 40 cents per ton. On pig-iron the duty of \$4 per ton is sufficient to enable well-located furnaces to run against foreign competition and ocean freights, but there is no good reason why the manufacturer of finished products should receive more protection than his just share, and it comes with a bad grace for him to suggest any reduction of the import duty on pig-iron and iron ore, especially the latter, that he may receive the benefit of foreign competition in securing those supplies that are essential to him, while the American iron-ore miner not only has to meet this competition or quit, but has to do it with American labor and with materials all of which are highly protected. If we are to have free iron ore, and thereby reduce the revenue of the Government to the extent of 40 cents per ton on all the iron ore imported, this loss must be made up by some other tax, and maybe a direct tax and one that does not bear on the foreigner.

J. H. WHITELEY.

Baltimore, Md., February 12.

Open-Hearth Steel in 1908.

The total production of open-hearth steel ingots and direct castings in the United States in 1908 was 7,780,872 gross tons, against 11,549,736 tons in 1907, a decrease of 3,768,864 tons, or over 32.6 per cent., according to the Bulletin of the American Iron and Steel Association. While the open-hearth production in 1908 was considerably smaller than in 1907, it was much larger than the production of Bessemer steel ingots and castings in 1908, the output of open-hearth steel in that year exceeding that of Bessemer steel by 1,664,117 tons, or over 27 per cent. This is the first time that the production of open-hearth steel has exceeded that of Bessemer steel. The maximum production of open-hearth steel was reached in 1907.

Subscribe to MANUFACTURERS' RECORD.
\$4 a year, or six months for \$2.



COMPLETED PORTION OF MODEL ROAD IN KENTUCKY.



MODEL ROAD AT CROSSING OF TENNESSEE-VIRGINIA STATE LINES.

CUMBERLAND GAP ROAD.**Model Part of the Once Noted Wilderness Road.**

The Wilderness Road, what it is and where did it run, are questions which must be answered today. Not so many years ago it was as noted and well known as any main trunk line of railway is today. In the early days, 1775 to 1825, there were only two ways of reaching what is now Kentucky, Ohio and the West from the East; one was by road to Pittsburgh and down the Ohio, the other by the Wilderness Road over Cumberland Gap, which connected Richmond with the Ohio River.

In 1792 a private subscription was made to improve the road, and in 1793 an act of the Kentucky Legislature made provision for guarding the road. In 1795 an act entitled "An Act opening a wagon road to Cumberland Gap" was passed and an appropriation of £2000 was made. In 1797 the Legislature appropriated £500 for the repair of the road, and many appropriations have been made since. The late Mr. Thomas Speed of Louisville prepared for the Filson Club a history of this Wilderness Road, which is of much interest, and the above facts are taken from this. He goes on to say: "The road came to be known as the Wilderness Turnpike, but it never became such a road as the word 'turnpike' usually signifies. It was only a natural mountain road worked and repaired and furnished with bridges and ferries."

The model road just completed is over the Cumberland Mountains at Cumberland Gap, and was very much needed. The country to the east of the Cumberland Mountains is a good farming section, but without much market. To the west of the mountains is the city of Middlesboro and a coal-mining section without any farming land, but a good market. The road between the two was formerly so rugged and steep that there was hardly any communication, and nearly all produce had to be brought in by rail. A tunnel was built under the Gap in 1890, and is now used by both the Louisville & Nashville and the Southern railways.

In 1895 the good-roads office of the Department of Agriculture was approached for assistance to construct an object-lesson road over Cumberland Gap, where the three States of Kentucky, Tennessee and Virginia meet. A committee of citizens of Bell county, Kentucky; Claiborne county, Tennessee; Lee county, Virginia; the city of Middlesboro, Ky., and the city of Cumberland Gap, Tenn., met to devise ways and means to raise the necessary funds. The three counties made formal applications to the good-roads office for its assistance and voted appropri-



TYPICAL STRETCH OF COMPLETED PORTION OF MODEL ROAD.

tions; subscriptions from corporations and private individuals completed the necessary amount. The work commenced in the summer of 1907, was suspended during the winter, but recommenced in the spring of 1908, and completed in November last. The department furnished an engineer to locate the road, a foreman to supervise its construction, and lent the necessary machinery. The road is 12,500 feet in length, divided as follows: 2000 feet within the corporate limits of the city of Middlesboro, Ky.; 5000 feet in Bell county, Kentucky; 4400 feet in Lee county, Virginia, and 1100 feet in Claiborne county, Tennessee. The roadbed is 20 feet wide; the macadam is 14 feet wide and 7 inches deep in the center. The cost of construction amounted to \$16,598.46.

The engineering work has been successfully accomplished by Mr. Fay McClure, the United States Government engineer in charge. The differences in elevation are

great, the pass in the mountains being 512 feet above Middlesboro, Ky., and 345 feet above the town of Cumberland Gap. To overcome these differences and not have an excessive grade and to avoid crossing any railroad required skill and experience.

JOHNSON CITY BUILDING.**Activity Consequent Upon Construction of a Railroad.**

[Special Cor. Manufacturers' Record.]

Johnson City, Tenn., February 25.

Perhaps no other town in the whole country of the same size (population 10,000) is doing more in the building line than is Johnson City. Business houses and dwellings have been started almost daily for the past year and a half. Within the past two years more than \$100,000 has been spent in the erection of fine churches, representing donations by the people. It is estimated that not less than 300 dwellings were erected last year, the average

cost of which was \$1000. Several fine store buildings as well as a fine modern primary school building costing approximately \$35,000 were built last year. Planned and under construction today are the following: Postoffice building (contractor, M. P. Wells of Philadelphia, Pa.), \$100,000; Dobson-Miller store building, \$10,000; Brading-Marshall lumber shed and warehouse, \$20,000; Crumley-St. John Hotel building, \$15,000; Pouder Bros. store building, \$5000; Cox-Slack store building, \$7500; Lee Hotel, \$7500; Martin-Parsons store building, \$5000; F. B. St. John store building, \$15,000; Geo. L. Carter, residence, \$25,000, and J. Norman Powell, residence, \$10,000.

These are all under construction, while the following have just been completed: Martin-Williams store building, \$8000; J. W. & S. S. Crumley store building, \$8000; J. C. Steam Laundry building, \$10,000; Soldiers' Home Hotel, \$30,000, and Taylor store (wholesale), \$10,000.

Here is a total of \$285,500. Besides these mercantile establishments, there are numbers of small dwellings going up all over the city, which will amount to another \$50,000. There has been a great scarcity of both stores and dwellings for the past three years.

The new postoffice is being built in the Carter addition, for which consideration shown Mr. Carter he in return agrees to build before the close of the year 1909 a depot to cost \$15,000, a modern department-store building, a large office building, a large hotel, to pave or macadam a mile of street and to build two miles of cement sidewalk, for all of which he has given the Government a bond of \$37,500. With these additional buildings the aggregate in expenditures for buildings will approximate \$750,000.

C. L. Bachman has plans for the erection of a five-story store and office building, which he contemplates building this spring and summer.

The realty changes which have taken place during the past 18 months will amount to more than \$1,000,000, George L. Carter alone spending \$750,000.

The cause for this great building boom and its chief support is the building of the Carolina, Clinchfield & Ohio Railroad, the northern end from Johnson City to Dante, Va., just now being completed. Mr. Carter is president of this road, and one of the principal stockholders and officers of the great Clinchfield coal properties, which are to find their outlet over this new road.

The town of Johnson City spent last year in street paving and sewer construction over \$100,000. Sewer construction is now going on with a large force of men

under the contract of Flynn & Boswell, and street paving will be resumed this spring and summer.

The Legislature has just passed an act giving the city a right to issue \$500,000 in bonds for the purpose of acquiring an adequate water supply, either by purchasing the present water company's plant and adding thereto or else to build an entire new plant.

Sealed proposals are now being received by the Government for the erection of additional buildings at the Soldiers' Home, the laborers for which will live and spend their money in Johnson City. The cost of upkeep for the Home amounts to \$500,000 a year, while the pension roll amounts to about \$50,000 every quarter. All of this is of incalculable benefit to the merchants of the city. This home is continually growing, principally because the altitude and water make it healthy.

IN RALEIGH'S INTEREST.

Developments In and Near North Carolina's Capital City.

[Special Cor. Manufacturers' Record.]

Raleigh, N. C., February 27.

The Montgomery Lumber Co. is building in the direction of Raleigh. President Guy I. Buell of the company says that the steel bridge across Tar River is being constructed, and that when this is finished trains will run to Bunn, about 14 miles this side of Spring Hope. The construction is excellent, 60-pound rails being used, and steel and cement for bridges, culverts, etc. The company this week was authorized by the State to increase its capital stock from \$250,000 to \$500,000. It is very well understood that Atlantic Coast Line trains can utilize this well-built lumber road to get into Raleigh.

Options have been secured at Raleigh for a strikingly fine site for an auditorium and apartment-house combined, and renewed interest has been manifested in this project. A bill has passed the Legislature authorizing the city to lease an auditorium, so the way is now open in this direction. Up to a few years ago State political conventions had been held in Raleigh for almost a century, but since then they have been, for lack of a proper auditorium, held at Greensboro or Charlotte.

A country club, with a membership embracing leading citizens, 125 in number, has been organized here, with Albert Cox as temporary president, and this is securing options on the most desirable sites around Raleigh for golf links, lake and park, clubhouse, etc.

The Carolina Light & Power Co. is now stringing its wires from Buckhorn Falls to Raleigh, the steel towers being in position. In this city they rest on five-ton concrete bases, and are nearly 90 feet high.

A letter from Beaufort states that excellent progress has been made in the dredging work in the Adams Creek-Core Creek Canal cut. The engineers feel confident that the work will be done within 18 months. Though the authorized depth of the canal is 10 feet, all the arrangements have been so made that it can be increased to 20 feet without disturbing the foundations of bridges, etc. Its width will be 90 feet at the bottom and 150 at the top.

Mr. Leonard Tufts, the owner of Pinehurst, is making inquiries as to the roads in this section, with a view to having an automobile highway from Richmond, Va., to Pinehurst. The greatest trouble as to the line will be north of here and beyond the limits of this county. Wake has built many miles of gravel road, which stands ordinary wear and tear very well. Between here and Pinehurst the roads are sandy, but are easily kept up in the main. This is a new movement in North Carolina, and naturally the growing number

of automobileists are interested, not to speak of others, concerning the construction of good roads.

W. S. Adams is building an extensive smelting plant at his nickel mine near Webster, in Jackson county, where there is declared to be an extremely promising prospect for ore, and the plant is to be in operation by June. An engine, the largest ever seen in that mountain country, has arrived and will furnish the power for the plant. The Cullowhee Mining & Reducing Co., at the village of that name, near Webster, is now operating fully its copper reduction plant.

A bill has passed the Legislature to charter the Denver & Lincoln Railway, which is to be 25 miles in length, in Lincoln county, and to traverse what is claimed to be a large bed of iron ore of a high grade of magnetite. There yet stands the ruins of the Vesuvius furnace, which went into operation in 1790; of the Derr furnace, built in 1809, and of the Reinhardt, built in 1814. The latter was operated by the Reinhardt family as late as 1882, and Commissioner of Agriculture William A. Graham tells the MANUFACTURERS' RECORD that in that year 200 tons of its iron was sold at \$50 a ton. Mr. Edward W. Shedd of Carthage, this State, is interested, with others, in building this road, and says it is largely to develop iron ore. Commissioner of Agriculture Graham says the Lincoln deposit of ore is inexhaustible, and that there is an ample supply of lime, so that only coke will be needed to make the iron and steel, and this could be brought by the Carolina, Clinchfield & Ohio. The Carolina, Clinchfield & Ohio expects also to haul ore to distant farmers. The commissioner is impressed by the fact that this is the most promising thing by way of development in the iron industry in the State.

FRED A. OLDS.

TO REARRANGE PRICES.

But No One Inclined to Lend in the Birmingham District.

[Special Cor. Manufacturers' Record.]

Birmingham, Ala., March 1.

It is a hard matter to correctly report the condition of the iron market. While all admit that there must be a rearrangement of prices, no one is inclined to take the lead in marking down values. Yet all concede that this is certain to occur.

I find no sales reported at a basis lower than \$12.50 for No. 2 foundry. Yet your correspondent had the most positive assurance that it could be had at a \$12 basis. Sales of analysis iron were reported from \$14.25 down to \$13.25, and there were numbers of small sales made on the \$13 basis for prompt and nearby shipment.

The inquiry was very appreciably better than for the preceding week, but the transactions concluded were less in magnitude. It just seemed that buyers were simply trying to find out what was market price. The sellers were imitating them. The buyers seemed to be afraid to buy, and the sellers were afraid to offer below the generally accepted quotation. So the week closed with a very unsettled feeling in the market. The condition is described with the declaration that the market is all at sea.

After the close of the week a telegram was received by one of the local papers from Mr. Joseph H. Hoadley, president of the Alabama Consolidated Coal & Iron Co., dated at New York, to the effect that his company had booked an order for 80,000 tons of pig-iron. None of the particulars were given, nor were the facts known to the office of the company here, and one is debarred from conjecturing the effect it may have on the trade. The market for scrap iron is in the same condition as reported last week. There is but a nominal

demand, and prices are unsettled, with difficulty in keeping track of them.

Besides being disturbed at the condition of the iron interests, there are very prominent evidences of interests being manifested in other directions. The water-works question is getting to be a live issue, and the voters are aligning themselves on the different sides of the question. There is a very large following in favor of the works being owned by the municipal government, and there is also a growing feeling that the interests of the city can be best conserved by a government by commission. In the proposition there are wheels within wheels, and no one can say with any certainty which proposition will successfully land the prize. But there will be an extra session of the Legislature in the near future, and before it all these questions will be threshed out, including the "Greater Birmingham." When the Legislature settles these questions there will be an impetus given to further progress here in this valley with which nothing in the past will compare.

Mention has been made in these letters of a new million-dollar hotel that was projected for erection at the corner of 20th street and Fifth avenue. The projectors have kept their object steadily in view, and on Saturday they organized as the Fifth Avenue Hotel Co. and took over the lot which is to be the site of the hotel, paying therefor the sum of \$160,000. The building will be erected by a stock company. The lot is 140x160 feet. The officers of the new corporation are W. H. Woodward, president; F. B. Fowlkes, secretary and treasurer. The board of directors is composed of some of our most prominent business men and capitalists. During the two months of January and February of this year 29 companies have been incorporated, representing a capitalization of \$2,300,000. Numbers of companies have added to their capital, and more are preparing to do so. They cover the various lines of investment one will find in any city that is in the line of progress. Advertisements for the construction of sewers on the south side will be opened this week, and contracts will be awarded amounting to at least \$200,000.

The city government and the Water-Works Company have come to an agreement on the questions that divided them, and the latter will erect upon Red Mountain a standpipe for the better protection of that part of the city. The Chicago & Alton Railroad will move its offices at Atlanta to this point on April 1. This means the establishment here of their Southern headquarters. J. M. K.

NEW ORLEANS IMPROVEMENTS.

Millions of Dollars Being Spent by the Municipality.

[Special Cor. Manufacturers' Record.]

Bureau of the MANUFACTURERS' RECORD, 1012 Maison Blanche.

New Orleans, La., February 27.

The activity of New Orleans in municipal improvement work is strikingly brought out in a statement prepared for the MANUFACTURERS' RECORD by City Engineer W. J. Hardee, showing the results accomplished by his department during the past year and the work that is planned for this, involving in all an outlay of about \$3,500,000. During 1908 streets were paved and bridges, viaducts and buildings constructed at a cost of \$920,234. For 1909 work has been started on paving of streets and construction of engine-houses and school buildings to cost \$467,212, and contracts have been entered into for paving sections of 19 streets at a cost of \$932,802.

In addition to these, bids have been accepted for paving a number of streets and the construction of several buildings

to cost \$326,717. Plans and specifications have also been completed for paving several streets at an estimated cost of \$800,000, and plans are also in course of preparation for paving some 15 or 20 additional streets.

The extent to which public improvements executed under the direction and supervision of the city engineer's department has increased in the past few years is well evidenced by the fact that when Mr. Hardee became city engineer in May, 1900, there were but three assistant engineers in the department, and at that time, and for several years following, they were kept busy but a few months in the year, whereas at present and for the past several years he has had nine assistant engineers, and every one of them has had his hands full at all times of the year.

Up to about this time last year improvements in street paving and construction of public buildings has annually increased under popular demand and the progressive policy of the first Behrman administration in anticipating the revenues of future years. But at about that time the contractors declined to bid for further work payable out of advanced future revenues, because of their inability to negotiate the form of certificates of payment as they were then issued, or to carry them themselves. Hence no additional contracts were made until recently, last year having been devoted to the completion of contracts already made. These included the paving of sections of Carondelet, Prytania, Magazine, Gravier and Robert streets, St. Roch, Tulane, Nashville and Opelousas avenues, and University place; sub-surface drains on Broadway street; the banqueting of Broadway and Patton streets; the construction of City Hall annex building, engine-house in Fifth ward and the Bienville school, and the construction of the Algiers viaduct and two Bayou St. John bridges. The total cost of this work was \$920,234, of which the city paid entirely for the buildings and the sub-surface drains and its portion of the paving, amounting in all to \$450,207, and the property-owners \$293,727 for their portion of the paving.

On recommendation of the city administration a bill was passed by the State Legislature which provided for a form of certificate of payment that is readily negotiable at slightly less than par value, so that bidders for all kinds of improvements have become active again. In consequence the city has been able to successfully contract on satisfactory terms for a very large amount of public improvement work. Under these contracts work is about started on paving sections of Dumaine, Teche, Howard, Broadway and South Franklin streets and the construction of engine-houses in the seventh and twelfth wards and at Algiers and the Beauregard school building. This work involves a cost of \$467,212, the city's share, including the entire cost of buildings and sub-surface drainage, being \$337,400.

In addition to this work contracts have been made and work will shortly commence on paving sections of South Solomon, Scott, Pierce, Neron, Spruce, Pine, Bienville, Soniat, Dryades, Cortez, Carondelet, Octavia, Calliope, Clio, General Taylor and Magazine streets and Esplanade and St. Charles avenues. These improvements will cost approximately \$932,802, of which the city's portion is \$663,100.

Bids have been accepted, and as soon as the contracts have been drawn by the city notary work will be started on the paving of sections of Lopez, Joseph, Robert, Walnut and Calliope streets and Esplanade avenue; the banqueting of State street and the construction of engine-houses in the Third, Fourth and Fifth wards and the Webster school building. The approxi-

mate cost of this work will be \$326,717, of which the city's share will amount to \$245,850.

It is expected that the majority of the improvements already contracted for, as well as those for which bids have been accepted and the city notary is drawing up contracts, will be completed during the next six months, and that all of them will be completed by the end of the present year.

Plans and specifications for the paving of sections of Carrollton avenue and Louisa street at an estimated cost of \$800,000, of which the city's portion will be \$500,000, will be completed and forwarded to the City Council at its meeting March 2, and it is expected that contracts for these will be adjudicated within the next 60 days and work started shortly thereafter. In addition to these two proposed improvements, the City Council has before it petitions for paving some 15 or 20 streets, and contracts for these will be adjudicated just as soon as this department can prepare the plan and specifications and the Council can provide for the payment of the city's portions of the cost.

There has been great activity during the past several years in sidewalk pavement construction, and the city engineer's department has had a large amount of work to do in furnishing grades for the same and inspecting and approving pavements after completion. There has also been a marked activity in the extension and opening of streets, which has necessitated a very large amount of work in surveys to demark street lines for the removal of encroachments, drainage ditches and sidewalk pavements. Taken altogether, this department well evidences the way in which the city is meeting the demand of the people for municipal improvements.

ALBERT PHENIS.

TO RECOVER 50,000 ACRES.

Big Lake Drainage Project Near Washington, N. C.

[Special Cor. Manufacturers' Record.]

Washington, N. C., February 28.

Reclamation of lands covered by the Mattamuskeet Lake of North Carolina, near this city, which has been projected for some time, seems now to be near realization. This project is considered of far-reaching importance to this section, and when consummated will not only open up a new tract of land for farming purposes, but will greatly enhance the value and productivity of lands adjacent to the lake.

Recently a bill was introduced into the General Assembly of North Carolina authorizing the State Board of Education to unite with certain landowners in Hyde county in establishing this drainage district, including Mattamuskeet Lake and the lands adjacent thereto. When this bill has become a law actual operations will be started to reclaim this extensive tract, and the work will be pushed vigorously.

Submerged under this body of water are 50,000 acres of land which, together with a riparian tract of 40,000 acres, will be available after drainage for cultivation. Contiguous to this tract of 90,000 acres there are 30,000 acres more of fertile lands, which will be made more productive when the proximity to wet lands is removed.

It is proposed to dig a canal 100 feet wide and 9 feet deep, connecting Mattamuskeet Lake on the east with Pamlico Sound. A pumping plant will be installed adjacent to the canal and the water will be drained from the lake, using the sound as an outlet. It is estimated that the cost of establishing this drainage district and draining and diking the lands will ap-

proximate \$375,000, three-quarters of which is to be paid by the State of North Carolina, and the remainder by the residents of the drainage district.

Seeing the possibilities offered by the successful consummation of this project, the United States Government has become actively identified with it, and has lent able assistance in establishing many essential points necessary before such a gigantic proposition can be declared feasible. A corps of engineers has made surveys of the property, and 63 borings have been made by the Government to procure samples of the soil, which were sent to Washington, D. C., for analyses. The soil found at the bottom of this lake has been pronounced very rich and fertile by the department at Washington which conducted the investigation, and those interested here are enthusiastic over the potentialities offered for diversified farming.

It is declared that after the canal is dug and the pumping station erected it will take only 60 days to empty the lake, and that in one year thereafter the land will be bearing crops. The cost of repairs and maintenance of the drainage system will be borne equally by all of the lands in the district. The State shall be reimbursed by the State Board of Education for all money it expends on the drainage district in accordance with the authority given the board by the General Assembly of the State, with interest at 6 per cent, out of the first proceeds received by the board from the sale of lands.

The carrying to a successful culmination of this project will open up a new and large field of opportunity for the investor and homeseeker. This land will be divided into small farms, and it is expected that, on account of climatic conditions, fertility of soil and accessibility to ready markets, there will be a great demand for them, especially by residents of Iowa, Illinois, Indiana and Wisconsin, where such a favorable combination is not so readily obtainable.

In connection with this proposed drainage proposition and giving impetus to it is the building of a railroad from Fairfield, N. C., on the north side of Mattamuskeet Lake, around the east and south sides of the lake to the proposed terminus at Washington. At first the line was only intended to be built as far as Belhaven, N. C., but under pressure brought to bear by the Washington Chamber of Commerce a bill was passed changing the charter and making Washington the western terminus. To assist in procuring this result a standing committee has been appointed by the Chamber of Commerce composed of Messrs. W. C. Rodman, chairman; W. K. Jacobson, Geo. J. Studdert, J. F. Tayloe and F. C. Mallison.

Operations have been carried on since April 14, 1907, and the line has already been extended as far as Belhaven. The grading of the roadbed has been done by 70 convicts, in payment for whose services the State has taken stock in the railway company.

The original object in building this railroad was to furnish an outlet for the agricultural resources of this section and to aid in developing Eastern North Carolina as a trucking section. The importance of the drainage scheme and its relation to the development of the Mattamuskeet Railway can be readily seen in the fact that the cultivation of 90,000 acres of rich fertile soil heretofore not considered, will increase the supply of agricultural products enormously, for which a market must be sought in neighboring sections. These necessary transportation facilities will be furnished to the new land by the new railroad.

A. WILLIAM FIELD.

GAS FOR NEW ORLEANS.

An Eighteen-Million-Dollar Project for Piping from Caddo Field.

[Special Dispatch to Manufacturers' Record.]
Bureau of the MANUFACTURERS' RECORD,
1012 Maison Blanche.

New Orleans, La., March 2.

Gas from the great Caddo field is to be furnished New Orleans if the plans of a company applying for a franchise here are to be carried out. Capitalists of St. Louis, which city is conspicuous in the railroad and other development of many parts of the South, are interested in this enterprise, and it is announced that capital to the amount of \$18,000,000 or \$20,000,000 is available for the project of piping the gas from the Caddo field to New Orleans. The City Council was tonight asked for a franchise to lay pipes in this city and to operate here. Under the rules the ordinance lies over for two weeks, and meantime the City Council as a whole is arranging to visit the Caddo field on a tour of inspection of conditions existing there.

The principal promoter of the enterprise is Harry B. Hawes of St. Louis, and with him are associated E. H. Everett of Washington, G. H. Walker and Lewis B. Ely of St. Louis and others. Some time has been spent in investigating the Caddo gas field, and on the strength of these investigations over 170,000 acres of land in the gas field have been secured by the members of the syndicate. It is declared that the supply of gas from the wells in the Caddo territory is sufficient to make this the greatest natural-gas field ever known in America, and as the gas is found at three separate depths, and with an enormous rock pressure in each strata, a long life is counted on for the field. It is proposed to pipe the gas into New Orleans, a distance of 300 miles, and to furnish it for manufacturing and domestic purposes. For manufacturing a maximum charge of 20 cents a thousand feet is proposed, and for domestic uses 50 cents is the figure named.

It is figured that the charge of 20 cents a thousand is somewhat below the price at which coal can be delivered to manufacturing plants in New Orleans, and there is considerable enthusiasm here among business men as to the outlook that is provided for a material development of the industrial interests of New Orleans. Philip Werlin, president of the Progressive Union, New Orleans, is personally identified with the enterprise, and with him are a number of local business men and capitalists, who see in the proposition an opportunity to give New Orleans a great forward stride as a manufacturing city.

Further developments in the matter will be watched with much interest. It is considered likely that the franchise will be granted substantially as asked for, as the Mayor and Council have expressed themselves favorable as to getting natural gas into New Orleans, and this is regarded as a feasible proposition made by responsible men.

It will take some weeks to arrange details in case the company obtains the franchise asked, but in that event it is being arranged to undertake the work of piping the gas to New Orleans and supplying it to the consumers here at the earliest possible moment.

ALBERT PHENIS.

Prospects at Tulsa.

[Special Cor. Manufacturers' Record.]

Tulsa, Okla., February 25.

During the first six weeks of the present year 48 building permits were issued here in Tulsa. The prospect for the year 1909 is better than that of last year. Among the office buildings for which plans are

now being made are the following: Dr. C. L. Reeder, five-story reinforced concrete, and W. W. Newsom, six-story reinforced concrete. The Board of County Commissioners is having plans made for a \$200,000 courthouse, but notice for bids will not be published until some time in the early summer.

The heavy production of oil in the Mid-Continent field for several months has become greater than the capacity of the four pipe lines now in existence. A movement is on foot in this city to build an additional line from here to some Gulf coast point, such line to handle oil strictly on a customs basis, it being the intention of the producers to sell their product at the seaboard rather than at the well, as is the present custom. Such a line will cost from \$4,500,000 to \$5,000,000, including feeders and pump stations.

E. T. TUCKER,
Corresponding Secty. Commercial Club.

The Georgia-Carolina Power Co.

Last week the MANUFACTURERS' RECORD reported the incorporation of the Georgia-Carolina Power Co., Augusta, Ga., with maximum capital stock of \$2,000,000. This company proposes to develop a water-power about eight miles above Augusta, and will generate about 10,000 horse-power for transmission by electricity. It has not selected a permanent engineer, and expects to begin development as soon as preliminary arrangements have been completed, the cost of the plant to be about \$1,000,000. N. B. Dial, president of the Reedy Power Co., Laurens, S. C., is the principal stockholder.

To Colonize in Texas.

[Special Dispatch to Manufacturers' Record.]
Houston, Texas, March 3.

The Allison-Richey Land Co. of this city has secured 50,000 acres of land near Penland, 12 miles from Houston, which it will colonize principally with Northern people, and has also purchased 12,000 acres of land in Jackson county and 12,000 acres of land near Victoria, in the same State. Last year this company settled homeseekers upon 75,000 acres of land on the Gulf Coast.

Industrial and Commercial Norfolk.

In a recent edition, embracing five sections, with an aggregate of 56 pages, the *Virginian-Pilot* of Norfolk comprehensively reviews the industrial, commercial and social progress of the city and makes timely reference to its possibilities for future development. It calls attention to the city's fine harbor facilities, railroad and factories, its rich agricultural back-country and its accessibility to the cotton, coal and iron fields of the South.

Wants Plans for Church.

Architects are advised to note that plans and specifications are wanted by March 15 for the construction of a church at Aberdeen, Miss. The site is 98x125 feet, and the building is to cost not less than \$27,500, with a seating capacity of from 800 to 900 persons. Address Gaston Therrell, secretary of the building committee.

Okra Paper.

Macon is determined to have okra pulp used as a paper-making material. At the annual banquet of the Chamber of Commerce of that city last week the menu was printed upon handsome paper made from okra and bound with okra fiber.

A report from Chattanooga says that L. A. Card of Soddy contemplates establishing an automobile line between Chattanooga and Dayton, Tenn., taking passengers also for intermediate points.

CURRENT EVENTS AS VIEWED BY OTHERS

COUNTRY LIFE COMMISSION.

[*Augusta (Ga.) Chronicle.*]

"The Country Life Commission," one of the innumerable bodies of people appointed to sit on other people and teach them how to attend to their own business, has just made a report, which the Senate has ordered to be printed "and lie on the table." It opens with the statement that, "Broadly speaking, agriculture in the United States is prosperous." If so, the question will be asked, What was the use of the commission? It was organized, it seems, to "organize rural life," but when rural life, or anything else, is getting on very nicely organization is disorganization. Needless intermeddling, however well intended, is always harmful; and, inasmuch as the commission has stated facts which show there never was any good cause for its creation, the best thing to do with its report is to do what the Senate did—lay it on the table.

This commission was organized in August, 1908, without any law to warrant it, and was composed of two agricultural editors, two agricultural professors and an employee of the Government in the Forestry Service; quite a happy selection if soil chemistry, crop rotation or tree planting had been the ends in view. But the chart of their instructions was that "Agriculture is not the whole of country life," and "good crops are of little value to the farmer unless they open the door to a good kind of life on the farm." In order to open this door the commissioners were directed to consider how "to prepare country children for life on the farm" and how "to brighten home life in the country and make it richer and more attractive for the mothers, wives and daughters of farmers."

If this means anything, it means that the farmers of the land are not treating their families exactly right and need touching up upon the subject.

In order to see how the alleged delinquencies of our farmers in these particulars are to be corrected we read the synopsis of the commission's report, but without thereby obtaining any light. We find a great many cant phrases, such as that this thing should be "energized" and the other "federated," but not one practical suggestion. The whole document merits the criticism by a practical father of his daughter's idealistic suitor—he has yearnings after the infinite, but he never pays cash.

The commission having been lugged in upon the farmer on the general plea that he needed instruction on how to live a "rural life," quits the scene with the candid admission that it can "only outline a general plan whereby the strong resident forces in the open country may themselves build up a new and better rural social structure." The language is turgid and cloudy, as the tongue of freakism and faddery always is; he who thinks nebulously always talks in a mist; but still you can catch a glimpse of the idea that, after all, the farmer is the best man to manage his own family and attend to his own affairs. And a very correct idea it is; but what was the use of a commission taking six long months to see it?

[*Charleston News and Courier.*]

The undertaking of the President of the United States to improve the conditions of farm life is entirely praiseworthy in its motive, but if it has for its premise the assumption that the American farmer is comparatively a poor man, suffering for comforts or for luxuries, it is not likely to have far-reaching results. Those Ameri-

can farmers who are not less industrious, prudent and ambitious than the American bank officials, physicians and shopkeepers enjoy, in our opinion, a larger average prosperity than do any of the latter. In South Carolina the farmer who began life with little or no capital and now has incomparably more of the world's goods than his village neighbor in business is by no means uncommon.

The segregation of the farmer, his withdrawal from his fellow-citizens in the towns with the vague feeling that is engendered in him as a consequence that the "town man" is his enemy is, however, an evil to be recognized and, if possible, to be corrected. In the Southern States a form of agrarianism extremely vicious in its political consequences was rampant a few years ago, and it was founded rather in a misunderstanding on the part of the farmers than in any real disadvantage or injustice to which they were subjected. In what is distinctly a business age the farmers are aloof from other business men and do not regard themselves as business men when in the natural order of affairs the producer of cotton, for instance, the raw material of the spinner, should have the same general point of view as the spinner of cotton.

FORESTRY IN ENGLAND.

[*New York Times.*]

In less than 30 years, according to the report on afforestation in the United Kingdom, just issued by the Royal Commission on Afforestation and Coast Erosion, there will be no timber available, unless the different countries of the world set about replanting immediately, and, although every country takes it up now, the regeneration will not be anything like half fast enough to keep pace with the consumption. And the report is so marked by knowledge, thoroughness and business spirit, and the recommendations so bold and far-reaching, that it is believed Parliament will act on them in the ensuing session.

The soil and climate of the United Kingdom, says the report, which, by the way, is signed by each member of the commission, including the chairman, Ivor Guest, M. P., are very favorable to the production of high-class commercial timber, and the State could profitably undertake the experiment of planting large areas as an alternative to a timber famine.

A sum of about \$10,000,000 annually, the commission believes, would be necessary to finance afforestation, but the money could be raised by loan. If money were expended at this rate for the 80 years which it would take to plant 9,000,000 acres, the value of the property might be expected to be \$2,810,375,000, or \$534,965,000 in excess of the sum involved in its creation.

Besides, "afforestation creates a new industry; it does not compete with private enterprise. The conversion of comparatively unprofitable lands into forests enhances the productiveness of the adjacent area, and should promote the development of the small holdings movement. More than any other apparent remedy, afforestation will stem the tide of rural depopulation." In addition, it is believed that employment would thus be furnished for 100,000 men.

The report continues: "The afforestation of suitable lands in the United Kingdom, if undertaken on an adequate scale and in accordance with well-recognized scientific principles, should prove at present prices a sound and remunerative in-

vestment. In estimating the profits of sylviculture account must, moreover, be taken of two facts—the increasing consumption of timber per head of population all over the world, in spite of the introduction of alternative materials, and, further, the exploitation, waste and destruction by fire of the virgin forests, especially those yielding the more important building timbers.

"Already a noticeable shortage of timber supply has resulted, as is evidenced by steadily rising prices and depreciating qualities in all markets. It seems impossible to escape from the conclusion that this tendency will be continued and accentuated, and that a steady and a very considerable rise in prices may be looked for throughout the present century."

"The amount of land suitable for afforestation, but not now under timber, in the United Kingdom may roughly be put at a maximum of 9,000,000 acres. A forest of 9,000,000 acres, in which are represented the various series of age-classes, may be expected to yield 9,000,000 loads annually in perpetuity. The importation of foreign timber from temperate climates into the United Kingdom in the year 1907 exceeded 8,500,000 loads, or approximately the annual supply which could be expected from the afforestation of the above-mentioned area.

"The withdrawal of 9,000,000 acres from its present uses would cause some gradual curtailment of food supplies and displacement of labor. Land suitable for afforestation is mostly devoted to the production of mutton. Calculations on the basis of the present consumption show that at most 60,000 tons, or 4.8 per cent. of the total home production of meat, or 2.6 per cent. of the present national consumption, would be ultimately displaced."

SPLENDID DRAINAGE RESULTS.

[*Charleston (S. C.) Evening Post.*]

The annual report of the Charleston Drainage and Sanitary Commission has been prepared by the secretary, Col. James Cosgrove, and printed in pamphlet form for distribution, giving an excellent review of what has been accomplished in Charleston county in reclaiming valuable lands for agricultural and industrial purposes, improving the roads, driving out mosquitoes and generally making this section healthier, more productive and remunerative and in every way a fit and desirable place of residence and industrial development.

The pamphlet sets forth, besides Colonel Cosgrove's report, the statements of expenses and incomes, list of vouchers, the reports of Civil Engineer S. Lewis Simons and the report of Dr. Alden J. Jersey, showing the health of the chain-gang officials and convicts to be good, concluding with an appendix, giving the list of subscriptions to the highway between Charleston and Summerville, and the expenditures which have been made on the work.

Colonel Cosgrove says, in part, in reviewing the work of the Charleston Sanitary and Drainage Commission: "This commission was created for the purpose of sanitary drainage in the malaria-infected districts of Charleston county, and the results accomplished in driving out that terrible scourge of our Southland have been so successful as to engage the attention of the entire country and serve as an object-lesson to all sections where this terrible disease is prevalent, but as our drainage work progressed it was found that we could not complete our system without

ditching the public roads and connecting these ditches with the drainage. In doing this we were confronted with the problem of getting rid of the excavated dirt, and the logical idea presented itself: Why not fill in the road and grade same, which could be done more economically and systematically with our force than under the system then in vogue? Authority was asked and granted by the Legislature for working of public roads in such territory in which our drainage system was established, and, in addition, we were authorized to work the Charleston-Summerville highway.

"When we commenced the work on this new highway so earnestly desired by citizens of Charleston county we found that Charleston county, although one of the oldest in the State, did not own a road machine, a dump wagon or a mule; in fact, no road machinery of any description. The working of the roads was done in a haphazard way, and, except in a few instances, without any special knowledge as to good-roads making. The money spent on the roads was practically thrown away, as no permanent work was done, and the same labor had to be done every year. The wooden bridges in use were a constant source of expense and a cause of damage suits. The results achieved by the systematic and intelligent use of the force of this commission have been astonishing when the low cost is considered, and is the subject of much favorable comment from the taxpayers. The roads in St. Andrew's parish are being improved constantly through our work, and the State road on Charleston Neck, which is now a part of the 'Summerville highway,' is as fine an example of good road making as may be found in the State. On this highway outside of Charleston county our efforts have been confined to raising and grading the very bad places, and we have succeeded in opening up a fairly good roadway to Summerville, but as a modern highway this road is still but an apology. The intention is, however, to surface same with cement gravel, and if this is done this highway will be second to no other, no matter where located. The interest in good roads is constantly increasing, and as an evidence of the interest taken in Charleston county and the awakening of the 'self-help' idea we with pride state that the sum of \$5,614.22 has been subscribed and paid in cash through public subscription to help build the Summerville highway."

THE "COMMISSION" FAD.

[*New York Journal of Commerce.*]

A very substantial percentage of the discussion in Congress during the session just closing has been devoted to what is called the "commission fad." By this is meant the habit, into which the executive department is held to have fallen, of appointing various "boards," and "commissions," and other extra-legal bodies for the gathering of information and the performance of semi-administrative work.

It may fairly be admitted that the appointment of commissions has gone too far and has been productive of some harm, notwithstanding the undoubted good that has been occasionally effected by these bodies along some lines. The harm, moreover, is likely to be cumulative, inasmuch as it is already plain that the work of such bodies may be used to influence public opinion or to supply data of questionable accuracy on which serious executive judgments may be based and because of which action may be too hastily called for.

They may also serve as nesting places for political favorites, and may at times derange the regular functions of the legally-created bureaus of the Government. But when all has been said it is impossible to have much sympathy with Congress in the fever of antipathy and jealousy to which it has roused itself. The truth is that the "commission fad" originated at the Capitol and that Congress has never hesitated to create these bodies when there was a need for good places for political favorites or statesmen who had been unhorsed in the melee. Only a few days ago through a kind of accident a job of this sort was discovered by the Senate, and a proposed "alcoholic liquor traffic commission," intended to provide an excessive salary for a certain defeated member, was, after much opposition, cut from an appropriation bill. The National Monetary Commission, with its costly machinery and its useless journeys and sojourns at the seaside, bears eloquent testimony that the "commission fad" has its real roots in the legislative branch of the Government. The executive is perhaps not to be especially blamed from the moral point of view for following a popular Congressional method.

The discussion regarding the "commission fad," however, like that of the alleged secret service evil, does point to an important issue. This is the present habit of making lump-sum appropriations without stopping to find out what they are for. The pending amendment which has been framed to prevent the disbursement of public money for the expenses of any board or commission not authorized by Congress points to the source of the trouble. Instead of prohibiting the use of any money for such a purpose, it would have been far better if appropriations had been so made as to render it impossible to devote any funds to an end not sanctioned by the legislative branch. If some money had to be placed at the absolute discretion of executive officers it would be entirely practicable to have it understood through oral communications what was the intended use of the cash, so that no such diversion as is now objected to could be effected. The simple truth is that Congress has been too busy and too much occupied with its own private affairs to take the trouble which is necessary for careful and minute legislation. Such legislation requires detailed study and most accurate knowledge of the minutiae of administration. It is far easier to reach the conclusion that an administrative official is worthy of confidence and then to turn over a fund to him to be disbursed as he sees fit than to safeguard it by designating its uses. Congress set the precedent for this sort of recklessness during the Spanish War, when it permitted enormous sums to be disbursed at the discretion of the President, and with no adequate accounting. The evil has grown rapidly, and is now at a maximum. That a correction of the whole condition should be had is obvious, and it is also clear that such a thoroughgoing remedy would entirely eradicate the evil of which Congress complains. No particular sympathy need be wasted on the legislative body until it is ready to take the remedy which is a specific for the disease.

Seeks a Southern Location.

L. Larson, 509 Market street, Canton, Ohio, writes the MANUFACTURERS' RECORD that he contemplates establishing in the South a plant for manufacturing ladies' fancy work tables, and is prepared to correspond relative to a location.

Messrs. James Fuchs, A. T. Fluger, Charles Nehring and associates have organized a company to establish an oil mill at Pflugerville, Texas, to cost about \$40,000.

LUMBER

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

Box Manufacturers Meet.

The tenth annual meeting of the National Box Manufacturers' Association was held at Chattanooga last week, with representatives from 27 States. Addresses of welcome were delivered by O. B. Andrews and Louis Reemelin, both of Chattanooga, to which a response was made by President C. Fred Yegge of the association. Secretary E. H. Defebaugh and Treasurer B. F. Masters presented their annual reports, after which reports of a routine nature were made. Among the subjects discussed and upon which papers were read were those of "Cost and Box Figuring," "Bulletins," "Lumber Markets and Conditions," "Tariff as Affecting the Box Industry," and others. The question of freight rates was also discussed at length. Officers for the ensuing year were elected as follows: C. Fred Yegge, Chicago, president; William Sexton, Cincinnati, first vice-president; W. F. Brown, New York, second vice-president; Oliver B. Andrews, Chattanooga, third vice-president; E. H. Defebaugh, secretary, and B. F. Masters, treasurer, both of Chicago.

Alabama-West Florida Lumbermen.

The Alabama-West Florida Lumber Manufacturers' Association will hold its annual meeting at the Exchange Hotel, Montgomery, on March 9. The program as announced will include the annual address of President Fred J. Hughes of Sumter, Ala., and the report of Secretary and Treasurer J. H. Eddy of Birmingham. Papers will be read by John L. Kaul, Richard Randolph and Fred Larkins, all of Birmingham, and J. F. Defebaugh of Chicago. Other features will be the business session, discussion of market conditions, election of officers and a banquet in the evening.

Naval Stores Production.

In 1908 eight Southern States produced 36,589,000 gallons of turpentine, an increase of 2,398,200 gallons over 1907 and 4,288,283 barrels of rosin, an increase of 288,902 barrels over 1907. Florida led both in the production of turpentine and rosin, 17,030,300 gallons and 1,932,114 barrels, respectively, followed by Georgia, Alabama, Mississippi, Louisiana, North Carolina, South Carolina and Texas in the order named. The combined value of the products in 1908 was \$31,895,886, which was \$3,704,482 less than the value in 1907.

Framing and Wheelwright Lumber.

Manufacturers of lumber are invited to correspond with Geo. P. Bewley of Berwyn, Md., who writes the MANUFACTURERS' RECORD that he wants market prices on gum framing and wheelwright lumber delivered in Baltimore, Philadelphia and New York.

Doubling Capacity of Box Plant.

The Holston Box & Lumber Co. of Knoxville is making satisfactory progress upon the construction of its new plant for the manufacture of boxes and box shooks, and expects to put it in operation about April 1. It will be equipped with modern machinery and have capacity double that of the plant which the company is at present operating.

Completing New Plant.

Construction work has practically been completed on the new plant of the A. T. Squier Lumber Co. at Palatka, Fla., which will have a daily capacity of 35,000 feet

of lumber. The plant is located on the river, where it is intended to construct a 200-foot pier for shipping purposes. In connection with the sawmill a modern dry-kiln has been completed with a capacity of about 80,000 feet. The company is said to own about 30,000,000 feet of timber at Omega, on Lake Crescent, with an additional supply along the St. Johns River.

Big Purchase of Timber Lands.

One of the most important deals recently closed for the purchase of Southern timber lands is that of Eddy & Glynn of Saginaw, Mich., who have secured over 15,000 acres of virgin pine in Washington county, Alabama. It is estimated that the timber will cut 170,000,000 feet of lumber, and the consideration is reported at \$650,000.

Lumber Notes.

The monthly meeting of the Georgia-Florida Lumbermen's Association was held at Tampa last week.

It is announced that members of the National Hardwood Exporters' Association will meet at Norfolk on March 11 and 12 to consider important subjects in connection with the hardwood lumber industry. President H. M. Dickson of Norfolk will preside.

MINING

Tennessee Copper Co.

The annual report of the Tennessee Copper Co. shows that it produced about 100,000 tons more of copper during the year ended December 31, 1908, than during the previous year, but its reserves were increased about 200,000 tons. Its net profits for the year amounted to \$324,768, a dividend of something over 6 per cent. on its capital stock, as against 16 per cent. in 1907. The cost of producing and marketing refined copper and pig was 10.50 cents per pound. At a meeting of directors the following officers were elected: Frederick Lewisohn, president; James Phillips, Jr., vice-president, and Walter Lewisohn, treasurer. The company operates copper mines and smelters at Ducktown, Tenn., and has its main offices at 11 Broadway, New York.

Leases 1000 Acres Coal Land.

The Little Rock (Ark.) Packet Co., which was recently incorporated with a capital stock of \$200,000 by W. M. Kavanaugh and associates, is reported to have closed a contract with W. H. West of Coal Hill, Ark., for the lease of 1000 acres of coal land in the Coal Hill district. The lease is for 10 years, it is said, and contains an option by which the company may purchase the property. There is at present a mine in operation, producing from 400 to 500 tons of coal per day, and it is understood to be the intention of the lessee to continue developments.

Mining Notes.

The Fort Branch Coal Corporation of Richmond, Va., has incorporated with a capital stock of \$150,000. Its officers include John W. Williams of Pearisburg, Va., president, and George M. Reid of Richmond, secretary and treasurer.

The Southern Coal & Transportation Co. has incorporated with a capital stock of \$500,000. Its incorporators are J. W. Miller, G. H. A. Kunst, Grafton, W. Va.; L. B. Stevens and B. E. Brown of Clarksburg, W. Va.

Interstate Cottonseed Crushers.

Upon invitation of the Merchants' Exchange of Memphis the executive committee of the Interstate Cottonseed Crushers' Association has decided upon that city as the place for the next annual meeting of the association, May 18-20.

TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the MANUFACTURERS' RECORD. We shall be glad to have such matters at all times, and also to have any general discussion relating to cotton matters.

Another Dan River Mill.

The Dan River Power & Manufacturing Co., Danville, Va., advises the MANUFACTURERS' RECORD that the company's management has definitely decided to build the proposed additional mill reported last month. This mill will comprise a three-story building 150x550 feet, equipped with 50,000 spindles and 1500 looms. It will be operated by electric power generated by water, with steam auxiliary. Messrs. Lockwood, Greene & Co., Boston, Mass., are the architects in charge. The new plant will cost approximately \$1,000,000. The company will increase its capital stock from \$3,000,000 to \$3,500,000.

To Build at Marion, N. C.

Messrs. D. D. Little of Spartanburg, S. C.; Carroll Baldwin of New York and Marion parties will build a cotton mill at Marion, N. C. They will expend \$200,000 for plant to manufacture fine cotton cloth, expecting to have it ready for operation by September 1. Mr. Little will be president and general manager.

Textile Notes.

W. P. and F. M. Pickett of High Point, N. C., are reported interested in a plan to build a cotton mill.

The Icemelee Cotton Mills Co. of Monroe, N. C., has not as yet arranged for the erection of the additional mill lately mentioned. This mill is to have 5000 spindles, thus doubling the company's facilities.

The Thompson Land & Investment Co. of Huntsville, Ala., mentioned last week, is endeavoring to organize a company to build a cotton and woolen mill at Elora, Tenn. It has not determined details.

The Green River Manufacturing Co. of Zirconia, N. C., has completed its mill and begun operations with 7000 spindles, etc., operated by a water-power-electric plant and producing fine combed yarns.

W. E. Cheswell of Westminster, S. C., contemplates the organization of a cotton-mill company, as lately reported. The organization depends on the development of water-power (recently purchased) for electrical transmission.

The Farmers' Union and the business men of Abilene, Texas, propose organizing company to build the cotton mill mentioned last week. W. R. Holland and J. R. Keeling of Guion, Texas, president and secretary of the Union, are active in the movement.

It is reported that the Alden Knitting Mill of New Orleans, La., has plans for the construction of buildings for its proposed branch mill at Meridian, Miss. The main structure is, it is stated, to cost \$10,000, and all buildings and machinery about \$30,000.

Oil Mills and Fertilizer Plant.

The Tallahassee Oil & Fertilizer Co. of Tallahassee, Fla., S. P. Storrs, president, has organized with a capital stock of \$50,000 for the purpose of establishing oil mills and a fertilizer factory. The company is reported to have awarded a contract to the Van Winkle Gin & Machine Co. of Atlanta for oil-mill equipment.

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

PENNSYLVANIA'S REPORT.

Gross Earnings All Lines East and West Amounted to Over \$274,000,000, a Decrease of \$52,000,000.

The annual report of the Pennsylvania Railroad Co. for the year 1908 shows gross earnings of all lines directly operated, \$136,296,871; operating expenses (including taxes, amounting to nearly \$4,000,000), \$101,400,992; net earnings from operation, \$34,895,878; net operating earnings (after the payment of rentals on roads operated on basis of net earnings), \$32,189,192; gross income, \$46,577,805. The increase which made up this latter figure included interest from investments, more than \$11,500,000, and hire of equipment, interest on general account, etc., more than \$2,887,000; net income (after the payment of rentals on leased roads, interest on bonded debt, on car trusts, on mortgages and ground rents), \$28,207,600. From this deductions were made amounting to \$8,672,848, which included over \$3,500,000 for revision of grades and alignment, the construction of additional tracks, etc.; \$1,000,000 toward building the New York tunnel extension; nearly \$3,800,000 for car trust principal, besides payments on account of sinking and trust funds. This left a balance of \$19,534,811, out of which were paid dividends amounting to 6 per cent., leaving a balance of \$650,131 to be transferred to the credit of profit and loss. The total amount to the credit of this account December 31, 1908, was \$24,254,800. The total assets of the company are \$706,443,086, including road, equipment and real estate at very nearly \$300,000,000, securities owned nearly \$235,000,000, New York tunnel extension over \$46,500,000 and current assets nearly \$84,000,000, besides other items. The cash on hand, which is included in current assets, is over \$56,000,000.

The tonnage moved east of Pittsburgh and Erie was 182,480,361 tons, a decrease as compared with 1907 of 41,746,713 tons, or more than 18½ per cent., while the passengers numbered 61,380,533, a decrease of 5,976,300, or nearly 9 per cent.

West of Pittsburgh the tonnage moved was 104,035,740 tons, a decrease of 51,864,686 tons, while the passengers numbered 30,291,763, a decrease of 2,709,930.

Gross earnings of all lines of the company east and west of Pittsburgh during 1908 were \$274,338,803, and net earnings \$70,733,267. As compared with 1907, the decrease in gross was \$52,446,722 and in net \$7,436,297.

It is expected to complete the tunnel extension into and through New York city in the summer of next year, 1910. The steel structure of the New York station is almost completed, and more than half of the exterior granite is in position. The tunnel work is well advanced, and east of the station it is ready for the tracks.

President McCrea also says: "It is gratifying to note that a more conservative spirit prevails in both the State and national legislatures in regard to the undue regulation of railroads, and that the tendency is to defer further legislation until an opportunity has been afforded to ascertain the practical effect of the laws now in force. This would certainly appear to be wise in the interest of the general public, as those who in good faith invest in such enterprises and from whom the necessary capital must be obtained to enable the railroad companies to furnish the facilities required for the accommodation of the public cannot reasonably be ex-

pected to continue to make such investment unless they receive the same protection that is afforded the owners of other property."

IGHT BUILD TO ELKHORN.

Virginian Railway's New Branch Suggests Possibility of a Route to Kentucky.

The stockholders of the Virginian Railway Co. have ratified the contract made with the Tidewater Construction Co. to build the branch from Mullens, W. Va., to Pemberton, 24 miles, on which construction has already begun. The building of this branch, which runs northeast and is designed to develop coal properties, directs attention to the possibilities of building a line in the opposite direction to the great Elkhorn coal fields in Pike county, Kentucky. This could be reached by a line about 50 or 60 miles long through Wyoming county and either McDowell or Mingo county, West Virginia. If by way of McDowell county, it would probably traverse part of Buchanan county, Virginia, in order to reach Pike county.

The building of such a division on the Virginian Railway would furnish a direct eastern outlet for the high-grade coal of that field, in order to obtain which the Chesapeake & Ohio Railway two or three years ago completed its Big Sandy division from White House to Elkhorn City, Ky. If the Virginian were to also build into the coal field fuel there, instead of following a long route northward to Kenova before going east, could make a direct line from Elkhorn eastward, connecting with the Virginian main line at or near its crossing of the Guyandotte River in Wyoming county, West Virginia. The construction of such a line would lie through a mountainous country into which few railroads have penetrated, but it has been said that there is a feasible route to the Elkhorn field. The Norfolk & Western crosses McDowell county to the south of Indian Ridge, which is the dividing line between McDowell and Wyoming, but northward there is no other east and west line until the Kanawha River is reached.

If the Virginian should build a branch to Elkhorn, which may or may not be contemplated, as some surveys were made by that company along the Guyandotte Valley, it would add to the coal tonnage of the road, which, according to statements concerning its carrying capacity, is capable of almost indefinite expansion. The Elkhorn field is regarded as one of the most important coal regions in Kentucky or West Virginia, producing a high-grade gas coal much needed in the East and likewise high-grade coking coal. Two companies own an aggregate of over 400,000 acres in that territory tributary to the C. & O.'s Ashland branch.

Dallas to Sherman and Denison.

According to a report from Dallas, Texas, the interests controlling the Texas Traction Co., which built and are operating the electric railway from Dallas to Sherman, Texas, 65 miles, have secured

control of the Denison & Sherman Electric Railway and will, beginning May 1, operate that line jointly with the Texas Traction Co.'s road, making a through line from Dallas to Denison via Sherman of about 75 miles.

It is further stated that all the properties of the Denison & Sherman Railway Co. have passed into the hands of the J. F. Strickland Company of Dallas, manager of the Texas Traction Co.

The directors of the Denison & Sherman Railway are: President and treasurer, J. P. Crerar of Denison, Texas; vice-president, John Crerar of Chicago; G. L. Blackford, C. S. Cobb, W. G. Meginniss and J. S. Kone of Denison, J. W. DeC.

O'Grady of Chicago, C. B. Dorchester and F. C. Dillard of Sherman, Texas.

The directors of the Texas Traction Co. are: President, J. F. Strickland of Dallas, Texas; vice-presidents, D. A. Templeton of Dallas, J. S. Heard of McKinney, Texas, and W. R. Brents of Sherman, Texas; treasurer, Osce Goodwin of Dallas, F. H. Proctor of Brookline, Mass.; W. G. Clark of New York city, R. H. Baker of Austin, Texas; M. B. Templeton, J. N. Simpson and G. N. Aldredge of Dallas, and W. J. Neale of Waco, Texas.

New Belt Line at St. Louis.

The Manufacturers' Railway of St. Louis, which is controlled by the Anheuser-Busch Brewing Association interests, will, it is reported, increase its capital stock and reorganize strictly as a railroad and terminal company, although the same interests will continue to control it. It is further stated that the company has purchased about 200 acres of land in South St. Louis and is buying more.

August A. Busch, vice-president of the Brewing Association, is reported as saying that the railway company will extend its line south or southwest of St. Louis to connect with several railroads, and the directors will consider a proposition to build part of a belt line outside of the western city limits. Immense freight yards will be laid out south of the city, and similar yards will be established on the Illinois side of the Mississippi. The company will operate its own transfer barges. It will also build large warehouses along its line, and land will be offered to secure the location of industrial plants.

The Manufacturers' Railway now has 52 miles of tracks, three locomotives and 72 cars. Its investments in line, yards and equipment amount to about \$2,500,000.

Line in Southern Maryland.

President Henry W. Watson of the Washington, Potomac & Chesapeake Railroad Co., 905 Girard Building, Broad and Chestnut streets, Philadelphia, writes the MANUFACTURERS' RECORD thus: "Our company is making an effort to sell \$200,000 of preferred stock to complete the railroad from Mechanicsville to Espanza, Md., the length of this extension to be 24 miles, of which 20 miles are graded. Connection will be made with the Pennsylvania Railroad at Brandywine.

The railroad at present runs from Brandywine to Mechanicsville, about 20 miles, and it is stated that the new stock, which will bear 6 per cent. interest, is to be secured by deposit with the Union Trust Co. of Baltimore of \$100,000 of bonds and \$4,000,000 of common stock, which represent all the outstanding obligations of the line excepting a small interest held by the State of Maryland. The extension will run through the heart of St. Mary's county, where the farm lands are susceptible of high cultivation for trucking purposes.

The Lafayette Railroad.

Mr. J. A. Kauffman, first vice-president and general manager of the Lafayette Railroad Co., recently chartered, writes from Lafayette, Ga., to the MANUFACTURERS' RECORD that it is expected to construct a short line between Lafayette and a connection on the Chattanooga Southern Railroad, five miles. A good grade has been established, but no contracts have been let for any work. Connections will be made with the Central of Georgia and the Chattanooga Southern. The officers are H. T. Kincaid, president, Dayton, Ohio; J. A. Kauffman, first vice-president and general manager, Lafayette, Ga.; Col. T. J. Kauffman, secretary and treasurer, Dayton, Ohio; R. M. W. Glenn, second vice-president and general counsel; W. D.

Morrison, assistant secretary; S. A. Hunt, assistant treasurer, all of Lafayette, Ga.; H. R. Klepinger, chief engineer; W. T. Sherman, assistant chief engineer, both of Dayton, Ohio. The directors include Messrs. Kincaid, Glenn, J. A. and T. J. Kauffman, R. N. Dickerson, S. A. Hunt, Jr., and S. M. Warthen.

Austin to Lockhart.

Mr. Thomas Moore, Austin, Texas, writes the MANUFACTURERS' RECORD that he has completed three surveys and prepared maps, profiles and estimates for the proposed line of the Texas Interurban Company from Austin to Lockhart, Texas, 30 miles. He has applied to the City Council for an extension of the franchise in Austin, and has made a proposition to promptly construct the road, providing donations or subscriptions are secured sufficient to insure the placing of securities. Colonel Moore has notified the citizens' committee that \$75,000 bonus should be raised in Austin to keep pace with subscriptions from Lockhart and the territory between, but that if the committee will raise \$40,000 from the wealthier residents of Austin he will undertake to raise the balance. He is now considering overtures from outside parties as to donations, and says he is in a position to promptly build the line, providing promised co-operation is given. The line will traverse a rich agricultural region already well settled and extensively cultivated.

New Equipment, Rails, Etc.

The Augusta Railway & Electric Co. of Augusta, Ga., it is reported, requires some new cars.

The Baltimore & Ohio Railroad is reported to contemplate ordering 20,000 tons more of rails.

The Virginia Southwestern Railway, it is reported, is having 10 gondola cars repaired by the Western Steel Car & Foundry Co.

The Woodward Iron Co. of Woodward, Ala., is reported to have ordered one locomotive from the Baldwin Works.

The El Paso & Southwestern Railway, it is reported, has awarded a contract for 6200 tons of rails for the Colorado Iron & Fuel Co.

The New Orleans & Northeastern Railway is reported to have ordered 1400 tons of rails from the Illinois Steel Co.

The South Baltimore Steel Car & Foundry Co. is to resume operations shortly, having a contract for 500 ventilated box cars for the Seaboard Air Line.

The Marshall & East Texas Railway, according to an official letter received by the MANUFACTURERS' RECORD, may purchase some new equipment. A. T. Perkins, 401 Locust street, St. Louis, Mo., is president.

Two Extensions in View.

Chief Engineer R. A. Thompson of the Wichita Falls Route, including the Wichita Falls & Northwestern and the Wichita Falls & Southern railroads, writes the MANUFACTURERS' RECORD that the Wichita Falls & Southern on February 15 registered, on the authority of the Railroad Commission of Texas, \$700,000 of permanent mortgage bonds in lieu of the same amount of temporary bonds previously registered, but which were canceled. The charter of this company provides for a line southward from Wichita Falls to Cisco, Texas, 150 miles. On this 52 miles have been built from Wichita Falls to Newcastle. Nothing is now being done to extend the line, but the company plans to do something in the near future.

Preliminary surveys are being made for an extension of the Wichita Falls & Northwestern Railway from Frederick, Okla., northwest, and it is planned to be-

gin construction on about 30 miles soon. The extension will run northwest from Frederick via Altus or Olustee, Okla.

Houston-Galveston Interurban.

Engineers for the Stone & Webster Corporation are reported to be investigating preparatory to beginning construction on the proposed electric railway between Houston and Galveston, Texas, about 55 miles. An inspection of the route has just been made, and it is said that the road will be practically an air line. The engineers are Walter Goodenough for the power-house, Lee H. Parker for equipment, W. L. Locke for construction, besides other experts, including R. T. Collins of New York, Mark Lowd, Andrew Vann and Manager M. M. Phinney of the Houston Electric Railway. They are at present engaged particularly with reference to choosing a site for the power-house, which is desired to be as nearly midway between Houston and Galveston as possible.

St. Paul to Elkhorn City.

An officer of the Carolina, Clinchfield & Ohio Railway, Johnson City, Tenn., writes the MANUFACTURERS' RECORD that the company has requested bids for constructing 40 miles of line from a point near St. Paul, Va., northward to a connection with the Chesapeake & Ohio Railway at Elkhorn City, Pike county, Kentucky. The country traversed is very rough; in fact, as rough as any through which any part of the road has been built. Final decision as to whether or not the line will be built has not yet been made, but the company expects a decision within a few weeks. Mr. A. W. Jones is assistant chief engineer, and Mr. Ward Crosby is division engineer in charge of construction. The general manager of the road is Mr. M. J. Caples.

Marshall & East Texas Contract.

An official letter to the MANUFACTURERS' RECORD says that contracts have been let to extend the Marshall & East Texas Railway 12 miles south from Marshall, Texas, and that the contract has been let to John Scott & Sons of St. Louis. R. J. Lockwood is resident engineer at Marshall, and J. E. Votaw, the general superintendent, will have charge of construction. It is intended to continue the extension beyond the 12 miles probably for a distance of 35 or 40 miles from Marshall. The country is heavily timbered.

It is probable that some additional equipment will be purchased, but this will be done by President A. T. Perkins at St. Louis.

Interstate Commerce Decision.

Mr. Daniel H. Hayne of Baltimore has sent to the other counsel in the docket case No. 1747 before the Interstate Commerce Commission, as well as to others interested, copies of the decision of that body as to its jurisdiction over water lines of transportation. The essence of this is presented thus: "Carriers of interstate commerce by water are subject to the act to regulate commerce only in respect of traffic transported under a common control, management or arrangement with a rail carrier, and in respect of traffic not so transported they are exempt from its provisions."

Gulf Line to Extend.

President G. F. Alford of the Gulf Line Railway Co., Sylvester, Ga., writes the MANUFACTURERS' RECORD that the company contemplates extending its line from Bridgeboro to Camilla, Ga., and is now surveying between those points, a distance of 20 miles, but expects to have the survey made farther south at an early date.

The contemplated extension will be about 30 miles, and will traverse a section of country which is covered by quite a fine lot of timber, and which is also an excellent farming region. Details as to construction have not yet been determined.

Extension Contemplated.

Referring to the press report that the Aberdeen & Asheboro Railway Co. has amended its charter to build an extension from Candor to Rockingham, N. C., an official letter to the MANUFACTURERS' RECORD says that the company is considering building a branch from some point in Montgomery county to Rockingham or through Rockingham to some other point in Richmond county, but there is no purpose to connect with the Bennettsville & Cheraw Railroad, as was suggested.

Chesapeake & Ohio Changes.

Major James H. Dooley of Richmond, Va., has been elected a director of the Chesapeake & Ohio Railway, and Frank Trumbull, who, with Edwin Hawley and others, recently acquired control of the line, has been elected chairman of the board. The executive committee consists of Chairman Trumbull, President Stevens, Edwin Hawley, Frank A. Vanderlip and J. W. Castles. James Steuart Mackie, secretary of the road, was elected treasurer.

Railroad Notes.

A. M. Kinsman has been appointed chief engineer of the Baltimore & Ohio Railroad, to succeed the late D. D. Carothers. Mr. Kinsman has been engineer of construction of the Baltimore & Ohio for several years.

The Roanoke Railway & Electric Co. of Roanoke, Va., has moved into its new three-story building at the corner of Campbell avenue and Randolph street. This structure is 50x90 feet, built of brick and stone, and is handsomely and comfortably equipped.

Farming Conditions.

In the first issue of the *Farquhar Bulletin*, which is to be issued monthly in the interests of the business of the A. B. Farquhar Company, Ltd., York, Pa., President A. B. Farquhar, referring to the total value, approaching \$8,000,000,000, of products of agriculture in this country last year, says that agriculture remains our most important and stable industry, and adds:

"The financial storm from which the business world is so slowly recovering, and which has wrecked so many industries during the past 16 months, has not appreciably injured the farmers. On the contrary, they are on the whole more prosperous today than ever before. They live better and can earn more money with the same labor. They have more leisure and more money for improving their surroundings, getting better roads and beautifying their homes. With the farmers well supplied with money by last year's bountiful crops, there will undoubtedly be an unusually large demand for farm machinery the coming season."

Big Texas Irrigation.

J. D. Cameron, 1020 Commerce Building, Kansas City, Mo., writes to the MANUFACTURERS' RECORD confirming the recent report that he has completed land purchases in Texas, making a total of 555,000 acres, at prices ranging from \$4.50 to \$30 an acre. These lands are in Crockett, Kinney, Terrell, Val Verde and Washington counties. Mr. Cameron states the main development will be on the Devil River in Val Verde county, where he and associates expect to construct a large dam for water supply and irrigation.

MECHANICAL

Forge Equipment at Technical School

Special work or service requires special apparatus. This is as true of the equipment of a forge shop as of any other workroom, and more so if the forge shop is for instruction. The ordinary blacksmith has a great variety of work to do, and naturally his forge is developed to do this work; the locomotive shop or shipyard must have its forges, but they must be large and in many cases have special devices for heating long and peculiarly-shaped pieces, and such forges frequently must have the tuyeres arranged in sec-

J. 28½ inches high, with a fire pan 38x40 inches. This forge, like the others, has a down-draft hood of the same construction, and a dumping tuyere.

The nine double forges are arranged in three rows, with the blast and hood levers so placed that the students must work on opposite sides of each pair of forges. To provide blast for the forge fires a Sturtevant "Monogram" blower on a platform discharges downward into a pipe which conveys air to each forge fire by means of four-inch blast pipe. The pipe is placed in a cement-lined duct, as shown.

The atmosphere of the forgeroom is kept free from smoke and gas by connecting



FORGE EQUIPMENT AT TECHNICAL SCHOOL.

tions, each with an independent blast connection, so that the fire may be the whole length of the forge or any part of it.

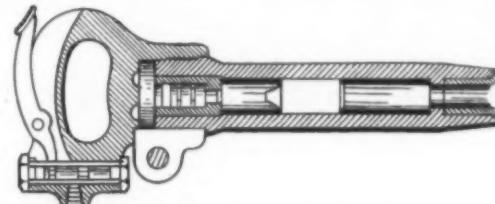
Thirty years' experience in making and using forges has enabled the B. F. Sturtevant Company of Hyde Park, Mass., to produce forges so highly developed that each becomes a special forge adapted to its particular service. For manual training schools the Sturtevant forges are of three kinds: The first, the recognized standard, is of cast iron, with open base for the reception of a hood to catch the refuse from a dumping tuyere; the second is also of cast iron, with four legs in place of the cast-iron base; the third, or double forge, is of steel-plate construction for base, hearth and pans. This type can be used in smaller space than the others, but it costs somewhat more.

each down-draft hood to the duct which surrounds the blast pipe. The duct is connected to an 80-inch Sturtevant steel-plate exhaust fan, which draws the smoke and gas through the duct and discharges into the atmosphere outside. The blower and exhauster are of sufficient size to care for 10 additional forges should it be necessary to install them. Herewith is a view of the technical shop at Springfield.

The Helwig Pneumatic Hammer.

The Helwig pneumatic hammer, here illustrated, is designed to meet the demand for a hammer of increased capacity, simple design, substantial construction—one convenient to handle, easy of operation and low in cost of operation and maintenance.

The valve mechanism is very simple.



THE HELWIG PNEUMATIC HAMMER.

In the Technical High School of Springfield, Mass., there are nine double and one single cast-iron forges, known as Sturtevant Type H-1. These forges are 20 inches high, with a fire pan 26x30 inches. The coal and water tanks are 24 inches long, 9 inches wide and 7 inches deep. Each forge is provided with an anti-clinker dumping tuyere. Each forge has a hood, with sides of cast iron and back of sheet steel. An inner plate in the hood protects it from the heat of the fire and brings a portion of the suction to the edge of the hood. The hoods are readily adjustable by means of the worm operated by the crank.

In addition to the type H forges, there is for the instructor a larger forge of type

Valve is balanced, of piston type, and of large wearing surface; it is made of solid tool steel, hardened and ground, and as it operates in the same direction as piston, the wear on it is reduced to a minimum and the full power of air allowed to be utilized for effective work instead of being wasted in overcoming friction; valve chamber—one piece—of simple and substantial construction, hardened and ground, is imbedded firmly in barrel, and cannot displace itself, although readily removable; piston is a solid piece of tool steel, also hardened and ground; handle, drop-forged in manufacturers' works, is of the closed type, the shape conforming to the natural grip of the hand; hose con-

nection, being located at right angles with barrel, makes it more convenient to handle the hammer; there is not so much pull of hose on the operator, and the hose, being out of the way, permits working in close quarters. There is also considerable saving in wear and tear on the hose, as well as on the threaded connection.

The simple locking device in the hammer prevents the handle from becoming loose; cylinder, or barrel, is made of material best adapted for the purpose.

The Helwig riveting hammer delivers a sharp, powerful, speedy blow, assuring tight rivets.

The Helwig chipping hammer has a faster cutting speed than other hammers; its speed can be regulated; also the weight of the blow from the lightest to the heaviest.

The hammer will not operate unless chisel is in place.

To illustrate the power of the hammer, it is stated that the four-inch stroke chipping hammer equipped with a rivet set will drive three-quarter-inch rivets steam tight.

The Helwig Manufacturing Co., St. Paul, Minn., manufactures the hammers.

Edwards Patent Corrugated Roofing.

It is claimed that corrugated is the strongest known form of sheet metal, and that it imparts material strength by its lineal rigidity to the structure to which it is attached.

The rigidity imparted to comparatively light sheets by corrugating makes them self-supporting, thereby permitting their use on light, inexpensive framing, the result being a substantial building with pleasing architectural appearance.

The objection heretofore to corrugated sheets for roofing has been that, except on steep roofs, the sheets being lapped, the

of fastening the sheets can be used on buildings having a pitch of from one and one-half to two inches to the foot.

center to center, and five-eighths of an inch deep, made of best quality Bessemer or open-hearth steel in No. 16 to 28 gauge,

mounted on a bracket fastened to one of the rear legs. Since the motor and fan case are both mounted on the same bracket,



AN ELECTRICALLY DRIVEN FORGE.

larger view illustrates the application of this roofing on the new steel sheephouse of the Cincinnati Union Stockyards

and furnished painted or galvanized. The roofing is manufactured by the Edwards Manufacturing Co. (the sheet-metal

they will always be in permanent alignment. The only wiring necessary is a plug connection to any lamp socket, or if forge is to be permanently located, wiring can be done in the usual manner. The motor regularly attached has a speed of 1700 R. P. M. at 110 volts, but a motor can be attached to meet the requirements of any particular circuit.

A special blower giving an abundant and efficient blast with a small consumption of power. A short, straight blast delivery pipe between blower and tuyere, in which all joints are eliminated with the exception of connection to blower and tuyere.

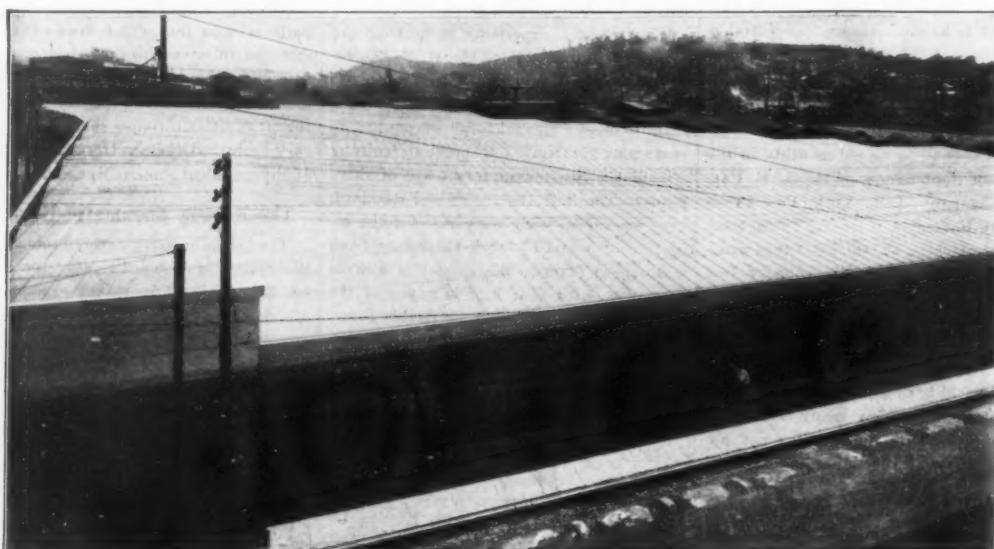
The tuyere is of the deep fire, anti-clinker type, in which is contained a controlling ball having three openings, which not only allows the blast to be directed to any part of the fire bed, but also acts in conjunction with the tuyere body so as to produce a whirling effect of blast, which is so necessary for all kinds of work where a quick, even heat penetration is a factor and economy of fuel is desired. The ash valve is of an improved type, and acts on the inverted clapper principle, counterweighted by a convenient ball handle.

The fire pan is of heavy cast-iron construction and large capacity, and is fitted with a sheet-steel hood made for eight-inch smoke pipe, a detachable sheet-steel tank and an extension bar or tong support. This allows the operator every convenience for a wide range of work. The fire pan is supported at a convenient height by wrought-iron legs strongly braced with steel braces.

The Whiting Foundry Equipments.

The Louisville (Ky.) Car Wheel & Railway Supply Co. was organized in 1871, and had probably the first car-wheel plant south of the Ohio River, although some wheels had been made in ordinary soft-iron foundries with the usual equipment of such foundries, annealing being done by keeping sand on the wheel, etc.

In 1907 the company began the erection



COVERED WITH EDWARDS MANUFACTURING CO.'S CORRUGATED ROOFING.

lap joints will prove defective and liable to leak in driving storms.

Two accompanying views illustrate the

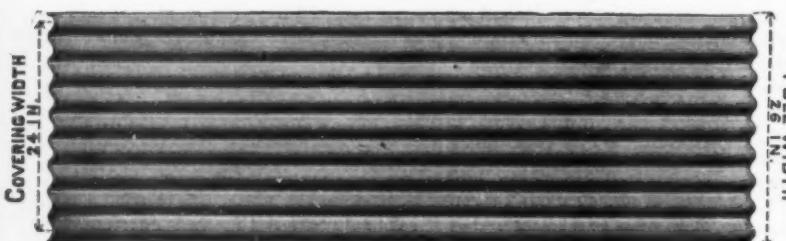
Co., Cincinnati, Ohio. This roof, comprising some 100,000 square feet of surface, has given perfect satisfaction, as is

folks), main offices and works at 411 to 431 Culvert street, Cincinnati, Ohio. Besides manufacturing roofing, the company manufactures a complete line of metal ceilings and side walls, metal shingles, metal Spanish tile, steel cluster shingles, galvanized-iron cornice and skylights, ridge roll, valleys, cresting, eaves trough, conductor pipe, ornamental stamped and spun work, etc.

An Electrically-Driven Forge.

An accompanying illustration is a view of an electric-driven blacksmith's forge which has been designed by the Buffalo Forge Co., Buffalo, N. Y. This new design embraces, among other improvements:

A motor directly connected to an all-steel fan, which runs at 1700 R. P. M. The motor and fan case are securely



EDWARDS PATENT CORRUGATED ROOFING.

Edwards patent corrugated iron or steel sheets for roofing, which, by a patented process, can be applied on iron purlins without riveting, and by a simple method attested by correspondence from the company to the manufacturer.

The smaller view is the sheet with corrugations two and one-half inches from

of a new plant provided with two switch tracks, one for shipping only and the other principally for receiving raw material. (See two accompanying illustrations.)

This plant was designed and equipped by the Whiting Foundry Equipment Co. of Harvey, Ill., with its well-known straight-line system. The building is of brick and steel construction throughout. The main structure is 200 feet long and 120 feet wide, with a side bay of 60x30

have their ends and sides enclosed, one side being fitted with a hinged door.

Through manipulation of valve, charge may be distributed as desired; level of charge must be maintained three to four feet below level of door sill to get best results.

The floor cranes are equipped with a balanced air hoist. This type having air under pressure on both sides of piston, makes it especially suitable for molding

fire. Each oven is provided with two lines of tracks, and can accommodate six cars each. These cars are constructed of channels, angles and plates, and are 4x4 feet 6 inches, with perforated plate shelves. This type of shelf makes it especially convenient for this class of work, as it is easy for sliding on and off cores. In order to facilitate the handling of cars a transfer car is provided in front of ovens. Annealing pits are served by two standard Whiting pitting trolleys with built-up structural frames. Each trolley handles two wheels at once, and thereby serves two rows of pits; each fitted with two five-horse-power

plant was designed and equipped complete by the Whiting Foundry Equipment Co., Harvey, Ill. (Chicago suburb). The following are a few recent Whiting installations: Canadian Pacific Railway, Montreal and Winnipeg, Canada, gray-iron foundries; American Enameling & Stamping Co., Granite City, Ill., ingot molds and general castings; League Island Navy-yard, Philadelphia, brass and gray-iron foundries; Canadian Northern Railway, Winnipeg, Canada, brass and gray-iron foundry; Canada Car Co., Montreal, Canada, capacity 300 wheels per day; Chicago, Milwaukee & St. Paul Railroad Co., Mil-



THE WHITING FOUNDRY EQUIPMENTS.

feet, containing cupola and blower rooms. It is equipped with 15 floors of 25 wheels per floor, making a total capacity of 375 per day.

Cupola-room is equipped with a No. 10 Whiting cupola, 96 inches in diameter and 52 feet 6 inches high, lined to a diameter of 78 inches inside; will melt at a rate of 24 tons per hour. At side of cupola is blower or power-room, equipped with No. 12 Sturtevant positive blower and a Chicago Pneumatic Tool Co. air compressor with a capacity of 250 feet of air per minute, both being driven by a 50-horse-power A. C. General Electric motor. The charging floor, 30x60 feet, is served by two three-ton Whiting pneumatic elevators, fitted with 20-inch balanced air hoist; floor is provided with four sets of tracks, with a transfer car at each end, the idea being to provide for storage of loaded cars before heat; then to gradually work them off through charging machine, and then down to ground floor for fresh charges. In front of cupola is a Whiting pneumatic charging machine. This machine consists of a platform hinged at a level above charging platform on side toward cupola, provided with a track for charging car in line with stationary tracks, as shown, guard, angles and a hook for holding car to platform when being dumped. A dumping cylinder is properly supported by framing attached to charging floor and pivoted to allow alignment required; piston rod is pivoted in a bracket attached to under side of platform; latter is constructed of structural shapes, and all joints are strongly riveted; hinge pins are of ample size, and arranged for easy removal and replacement; an apron plate is hinged to platform and laps over inclined chute in front of cupola door; controlling valve is located at any convenient point, and is piped to cylinder and connected with air supply. In operating, car is run on platform and hook engaged with an eye attached to car frame; then valve is opened to admit air into operating cylinder and platform is raised to dumping position; iron charges are put on cars with ends about 12 inches high, but open on both sides; coke cars

floors, its action closely resembling the hydraulic hoist; valves for these hoists are attached to structural work independent of hoist, and are of special heavy construction to withstand heavy usage necessary for this work.

The coreroom and ovens are located in a separate building 30x80 feet. This building is equipped with two core ovens, with space for a third: one core oven is 9x16 feet without side racks, the other is 13x16 feet, with side racks, both being 8 feet

alternating current General Electric motors; also fitted with Whiting semi-automatic pitting tongs.

The operator's platform, reservoir, ladle, train distributing iron and hot-wheel train, delivering wheels to annealing pits, are practically duplicates of equipment furnished to Chicago, Milwaukee & St. Paul Railroad.

The motors are three-phase, alternating current, and were supplied by General Electric Co., Schenectady, N. Y. As far as possible, they were made in duplicate, being distributed as follows: Reservoir ladle, five horse-power; ladle trains, five horse-power; hot-wheel train, five horse-

waukee, Wis., capacity 550 wheels per day, and American Car & Foundry Co., Madison, Ill., capacity 600 wheels per day.

The Parker Logging Machinery.

In these days of close competition and high price of stumpage, efficient labor-saving machinery in the logging woods constitutes an important factor for lumber companies intending to manufacture on a profitable basis.

Surry Parker of Pine Town, N. C., has been building a steam logging machine for a number of years that has met with great favor among the North Carolina pine manufacturers.

The portable steam logger which Mr. Parker builds to go in the woods is remarkable for its great strength and light weight, making it especially desirable for all classes of logging railroads. He builds this machine in six sizes, suitable for all weight rails, any gauge of track from 20-pound 36-inch gauge road to 60-pound standard-gauge track, and each machine suitable for the timber.

Mr. Parker devised the machine to do his own work, logging enough logs to cut 150,000 feet of boards daily for a number of years, and the building of the machines has been the outcome of a natural demand.

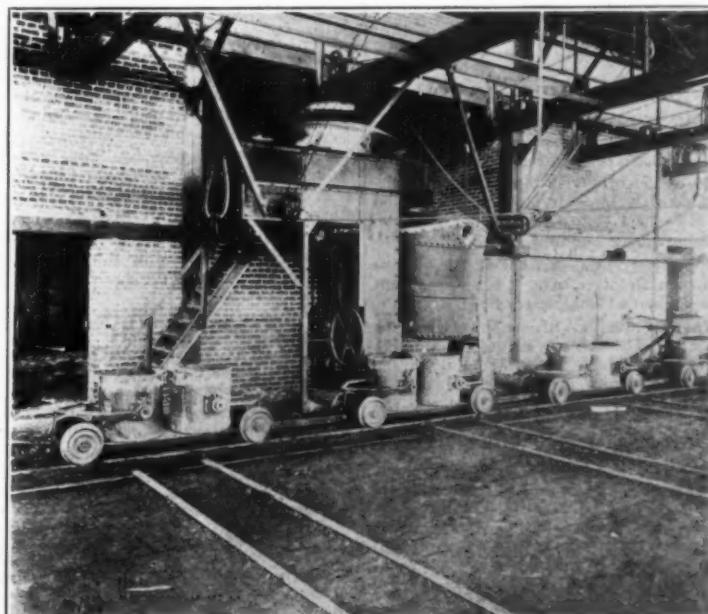
There are over 400 of Parker machines in use, some of the larger companies buying one at the time until they have as many as 10 machines in use, and many prominent companies have more than one; some have three, four and five machines.

Mr. Parker also builds a special machine to load standard-gauge cars to the limit of their capacity. This machine saves loss in freight charges on logs by loading the cars a full load each trip.

Herewith is a view of a Surry Parker machine at work in a forest.

At the first annual meeting of the Commercial Secretaries of the Carolinas John Wood of Greenville was elected president; W. T. Corwith of Charlotte, W. L. Gilbert of Hickory and W. H. S. Burgwyn of Weldon, vice-presidents, and C. W. Moorman of Columbia, secretary.

The Board of Trade of Florence, S. C., has 52 members, with Messrs. N. W. Hicks, president; J. L. Barringer, vice-president, and Charles E. Commander, secretary.



THE WHITING FOUNDRY EQUIPMENTS.

high. They are fitted with counterbalanced sliding doors; both are fired from a pit in back; heat from fire box distributed by special arrangement of flues, insuring equal distribution of heat, the steam and gas escaping in stack from an opening located at floor line. For firing up they are provided with damper located at top of oven, which opens to allow escape of smoke and is closed as soon as they obtain a clear

power; pitting trolleys, two five horse-power; floor cranes, 15 horse-power; blower and compressor, 50 horse-power.

The power for this new car-wheel foundry is supplied by the Louisville Lighting Co.; structural steel work was erected by Snead Architectural Iron Works, Louisville, Ky.; corrugated iron for sides and roofing was furnished by Youngstown Steel & Tube Co., Youngstown Ohio. The

Construction Department

TO OUR READERS!

In order to understand and follow up properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY

The MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the MANUFACTURERS' RECORD.

ADDRESS FULLY

To insure prompt delivery of communications about items reported in these columns, the name of one or more incorporators of a newly incorporated enterprise should be shown on the letter addressed to that town, or to the town of the individual sought, as may be shown in the item, as sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. This will help to insure prompt delivery of your communication, although it is inevitable that some failures on the part of the postal authorities to deliver mail to new concerns will occur.

WRITE DIRECT

It is suggested to advertisers and readers that in communicating with individuals and firms reported in these columns, a letter written specifically about the matter reported is likely to receive quicker and surer attention than a mere circular.

BRIDGES, CULVERTS, VIADUCTS

Camden, S. C.—M. C. West, County Supervisor, will receive bids until March 25 for construction of steel bridge across Wateree River; one span 375 feet and one 130 feet, with concrete abutments. (See "Machinery Wanted.")

Chattanooga, Tenn.—Chickamauga Park Commission, E. E. Betts, engineer in charge, 905 and 906 James Bldg., contemplates construction of steel bridge in connection with roadway from St. Elmo, Tenn., to Rossville, Ga. (See "Road and Street Improvements.")

Cloverport, Ky.—Louisville, Henderson & St. Louis Railway, S. Stites, chief engineer, Louisville, Ky., reported to substitute cement work where wood is now in use for bridges, culverts, etc., expending \$50,000.

Granbury, Texas.—Hood county will construct bridges. Address County Commissioners.

Havre de Grace, Md.—Pennsylvania Railroad Co., A. C. Shand, chief engineer, Broad Street Station, Philadelphia, Pa., has commissioned engineers to prepare plans and estimates for repairing bridge across Susquehanna River; proposed to erect draw to replace old one 22 feet wide; estimated cost \$25,000.

Independence, Ky.—Kenton county will reconstruct DeCoursey Bridge over Banklick Creek; cost about \$20,000.

Montgomery, Ala.—Montgomery county will vote March 25 on issuance of \$150,000 of bridge and road bonds. Address County Commissioners. (Previous election illegal.)

Tampa, Fla.—City is considering bond issue for construction of bridges. Board of Public Works has been instructed to secure plans and specifications for proposed bridge to span Hillsborough River at Lafayette street. Address The Mayor.

Texarkana, Ark.—City will construct two steel bridges; contracts will soon be awarded; appropriation \$10,000. Address The Mayor.

Tulsa, Okla.—Tulsa County Commissioners awarded contract at \$13,256 to Central States Bridge Co., Indianapolis, Ind., for construction of 13 new bridges.

Walker County, Ga.—Chickamauga Park Commission, E. E. Betts, engineer in charge, 905-906 James Building, Chattanooga, Tenn., will advertise for proposals in about a month for 90-foot steel truss highway bridge to span West Chickamauga Creek.

CANNING AND PACKING PLANTS

Baton Rouge, La.—Baton Rouge Trucking Association warded contract for erection of \$10,000 cannery in Baton Rouge; capacity about 20,000 cans daily.

Beaumont, Texas.—William A. Daugherty, Crushman, Ark., contemplates establishment of cannery for figs.

Cameron, Texas.—Cameron Canning & Produce Co. is title of company recently reported to be incorporated with \$10,000 capital stock; A. N. Green, president; J. D. Hefley, vice-president; V. K. Bessonette, secretary and treasurer; will erect cannery for vegetables and fruits with capacity of 15,000 three-pound cans daily; iron and frame building; two stories and basement; basement 30x40 feet; first floor 40x90 feet; second floor 40x40 feet; mill construction; cost of buildings, \$2500; cost of machinery, \$300; plans prepared by V. K. Bessonette, Cameron, engineer in charge.

De Queen, Ark.—De Queen Fruit Growers' Association promoting organization of company to establish cannery.

Kansas City, Mo.—A. Weber Meat & Provision Co. organized with \$100,000 capital stock by A. Weber; will erect packing plant.

Leola, Ark.—Company organized with \$5000 capital stock by W. H. Reid, T. M. Durand and Ed W. Moore to establish cannery.

Lufkin, Texas.—I. B. Sheldon and A. Strand are promoting organization of company with \$8000 capital stock to establish cannery.

Pulaski, Tenn.—Pulaski Canning Co. will erect addition to plant recently purchased; to have daily capacity of 1500 cans, hand-packed. W. L. Abernathy, Pulaski, can be addressed. (Hall & Kennard, Dickson, Tenn., recently noted as organizing company to erect addition to plant.)

Raymond, Ga.—Raymond Land Co., Ashby Purse, secretary, interested in plan to establish cannery for vegetables, fruits, etc. (See "Machinery Wanted.")

Tulsa, Okla.—Mehle Packing Co. incorporated with \$50,000 capital stock by Albert Mehle, John W. Kreps and George Schoemann.

Wilmington, N. C.—J. B. Mercer, D. McEachern, William E. Springer and others promoting organization of company with \$20,000 capital stock to establish cannery.

CLAYWORKING PLANTS

Delhi, La.—Planters' Industrial Institute, James Chambers Wilson, president, will establish brick-manufacturing plant.

Greenville, Miss.—The, etc.—Greenville Tile & Cement Co. incorporated with \$30,000 capital stock by LeRoy Percy, J. H. Crouch, H. C. Hornighouse and others.

Montgomery, Ala.—Brick and Tile.—James and John McIntyre have, it is reported, purchased plant of Montgomery Brick & Tile Co.

Wheeling, W. Va.—Riverside Potteries Co. organized with \$500,000 capital stock by B. W. Peterson, J. E. Wright, F. J. Park and others; will take over Wheeling Potteries Co.

COAL MINES AND COKE OVENS

Altoona, Ala.—Altoona Fuel Co. incorporated with \$10,000 capital stock; George V. Van Zandt, Oak Park, Ill., president; Jos. McDonough, vice-president; Wm. J. Boyd, Jr., secretary and treasurer; offices at Birmingham, Ala.

Baltimore, Md.—Mossessian Coal & Coke Co. incorporated with \$25,000 capital stock; E. H. Clark, president, 515 Equitable Bldg.; K. R. La Motte, treasurer, and L. G. McClung, secretary, all of Baltimore.

Coal Hill, Ark.—Little Rock Packet Co. recently reported incorporated with \$200,000 capital stock by W. M. Kavanaugh and others, Little Rock, Ark., leased 1000 acres of coal land in Coal Hill mining district and will continue operations; mine now in operation produces about 500 tons daily; will prepare to ship coal by water and rail.

Grafton, W. Va.—Southern Coal & Transportation Co. incorporated with \$500,000 capital stock by J. W. Miller and G. H. A. Kunz of Grafton, L. B. Stevens and B. E. Brown, both of Clarksburg, W. Va.

Huntington, W. Va.—Cuyago Coal & Coke Co. incorporated with \$25,000 capital stock by Paul W. Scott, H. T. Lovett, J. S. Sheppard and others.

McDowell County, W. Va.—Vista Mineral Co. has organized with W. H. Gregg, president, and E. J. Lerrick, secretary; main office, Cambridge, Ohio; has purchased land in McDowell county and leased coal property to Mina Coal Co., Cambridge, Ohio, for development. (Lately mentioned.)

Middlesboro, Ky.—Mountain Lake Coal Co. has, it is reported, taken over Fern Lake Coal Co. and will operate plant; Harry Nicholson, general manager.

Morgantown, W. Va.—Cochran Coal & Coke Co. contemplates developing in near future 12,962 acres of coal lands in Monongalia county.

Rich Hill, Mo.—Jones Coal Co. has leased and will develop coal mines south of Rich Hill.

Richmond, Va.—Fort Branch Coal Corporation incorporated with \$150,000 capital stock; John W. Williams, Pearlsburg, Va., president; George M. Reid, Richmond, secretary-treasurer.

West Virginia.—Gulf Coal Co., S. J. Patterson, Dayton, Ohio, president, will develop coal mines on 800 acres of land it owns and has under lease in West Virginia; expects to have mine in operation by August 1 and to produce 1200 tons daily.

Woodward, Ala.—Woodward Iron Co., J. H. Woodward, Birmingham, Ala., president; reported to add 150 coke ovens to its batteries at Woodward.

CONCRETE AND CEMENT PLANTS

Warrenton, Va.—Warrenton Concrete Co. incorporated with \$5000 capital stock; E. R. W. Barker, president; E. O. Hayes, vice-president; M. W. Ferguson, secretary and general manager.

COTTON COMPRESSES AND GINS

Butler, Ga.—Butler Fertilizer Co. organized with \$8000 capital stock; C. H. Neisler, president; will establish cotton gin. (See "Miscellaneous Manufacturing Plants.")

Clarksville, Ark.—Clarksville Ice & Gin Co., Joseph Evans, president, will install \$12,000 worth of cotton-gin and ice machinery in plant; capacity of gin, 30 bales daily.

Cross Hill, S. C.—Cross Hill Oil Mill will install six to eight stand cotton gin; steam or gasoline power plant. (See "Machinery Wanted.")

Lauderdale, Miss.—Lauderdale Gin & Manufacturing Co. has secured warehouses to replace burned building and will install two stand cotton-gin outfit; daily capacity, 20 to 30 bales; cost of machinery, \$250.

Lightfoot, Tenn.—Lightfoot Gin & Mill Co. incorporated with \$4500 capital stock by J. F. Minner, A. C. Platts, W. H. Foust and others.

Stacy, Texas.—Stacy Gin Co. incorporated with \$8000 capital stock by R. C. Sloan, J. M. Sloan and W. W. Trott.

COTTONSEED-OIL MILLS

Mt. Olive, N. C.—J. R. McPhail, Jr., is promoting establishment of cottonseed-oil mill, to cost about \$30,000.

Nixon, Texas.—P. H. Tom will, it is reported, establish cottonseed-oil mill.

Pflugerville, Texas.—Company organized by James Fuchs, A. T. Pflug, Chas. Nehring and others to establish cottonseed-oil mill to cost \$40,000.

Tallassee, Ala.—Tallassee Oil & Fertilizer Co. organized with \$50,000 capital stock; S. P. Storrs, president; will establish cotton-oil mills and fertilizer factory; contract for oil-mill machinery awarded to Van Winkle Gin & Machine Co., Atlanta, Ga.

Washington, Ga.—Southern Cotton Oil Co. main office, New York, will, it is reported, make improvements to plant at Washington; to remodel, install additional machinery and increase capacity.

ELECTRIC-LIGHT AND POWER PLANTS

Augusta, Ga.—Georgia-Carolina Power Co. proposes to develop water-power eight miles above Augusta; will generate 10,000 horse-power for transmission by electricity, and plant will cost about \$1,000,000; permanent engineer has not been selected; expects to

begin development as soon as preliminary arrangements are completed; company reported incorporated lately with maximum capital stock of \$2,000,000; N. B. Dial, president of Reedy Power Co., Laurens, S. C., principal organizer.

Berlin, Md.—City has received plans and specifications for electric-light plant and water-works lately reported; will open proposals March 16; engineers in charge, Dodge & Day, Washington Bldg., Philadelphia, Pa.; Mayor, Orlando Harrison. (See "Machinery Wanted.")

Binghamton, Station Memphis, Tenn.—Binghamton Electric Power Co. incorporated with \$25,000 capital stock by J. A. Omberg, Jr., S. M. Neely, W. M. Boyle and F. W. Faxon; will build electric-light plant at cost of about \$15,000 and furnish city and vicinity with electric lighting and power; building will be 85x20 feet.

Carrollton, Ga.—City will vote March 30 on issuance of bonds for either buying and enlarging present plant or building new system. Address The Mayor.

Fort Payne, Ala.—Alabama Railway & Power Co., previously reported, plans to build water-power-electric plant to transmit electricity for power to Birmingham and intervening towns, a distance of 70 miles from proposed power plant; details not yet determined; president, H. T. Henderson of Henderson Engineering Co., Durango, Col.; vice-president, J. H. Hill, Fort Payne; secretary-treasurer, Chas. L. Young, Jr., of Henderson Engineering Co., Durango.

Greenville, Tenn.—City will vote March 20 on issuance of \$40,000 of bonds for purchasing or erecting electric-light and water-works plants. Address The Mayor.

Hope, Ark.—T. C. Croson has contract to construct proposed power plant at Hope; building 60x80 feet; concrete foundation; contract price, \$5460.

Houma, La.—Calvin Nuzlow, Mayor, and Board of Aldermen, Houma, La., will receive bids until March 2 on alteration and enlargement of present water-works powerhouse to such an extent as to accommodate electric plant. Specifications can be obtained from Anderson Offutt, E. E., 439 Carondelet St., New Orleans, La., and D. Angus, Clerk, Houma; only cypress lumber to be used; bids to be addressed to Mr. Angus. (Recently mentioned.)

Jefferson, Texas.—Jefferson Ice, Light & Power Co. incorporated with \$50,000 capital stock by John T. MacDonald, M. Bower and R. B. Walker.

Mangum, Okla.—Mangum Electric-light & Power Co. incorporated with \$100,000 capital stock; C. L. Patterson, president; P. A. Janeaway, vice-president; J. W. Chambers, secretary-treasurer.

Mansfield, La.—Mansfield Ice Plant & Light Co. is negotiating with city for purchase of municipal light plant for \$6150.

Monroe, N. C.—Southern Power Co., Charlotte, N. C., purchased site on which to erect transformer station; building to be of brick and cement; electricity will be transmitted from water-power electrical development on Catawba River, near Charlotte.

Newcastle, Va.—Craig Water-Power Co. (lately reported under Roanoke) will develop two water-powers; each will generate 2500 horse-power, not 25,000 as heretofore stated; first plant on Meadow Creek, Newcastle, to develop 2500 horse-power under a fall of 800 feet of head; equipment to include steel tower transmission line 20 miles long to Roanoke, with capacity for both plants; second plant, to be installed later, on John's Creek, to develop 2500 horse-power under 225 feet of head; A. L. Sibert, president, Roanoke, Va.; C. S. Wenger, engineer in charge, Woolworth Bldg., Lancaster, Pa., or Brownstown, Pa.

Sumter, S. C.—City will open bids March 9 for furnishing city with 50 enclosed incandescent arc lights, 6.6 amperes, 2000 nominal candle-power; C. M. Hurst, Clerk and Treasurer. (See "Machinery Wanted.")

Taylor, Texas.—City will consider on March 9 proposition of W. B. Johnson and associates of Palestine, Texas, for franchise to build electric-light and gas plant in Taylor.

Vidalia, Ga.—City contemplates issuance of \$9000 of bonds for improving water-works and electric-light plant. Address The Mayor.

Washington, Ga.—C. S. Lucas and associates contemplate construction of water-power-electric plant about 10 miles from Washington; has not arranged details and

wants to correspond with engineers and manufacturers of necessary machinery. (See "Machinery Wanted.")

FLOUR, FEED AND MEAL MILLS

Chattanooga, Tenn.—Howard & Henderson, care of J. M. Howard, 703 McCallie ave., will build \$5000 grist mill at Harrison avenue and Bachman street, East Chattanooga (suburb); main building will cost \$1500; 32x62 feet; two stories and basement; frame iron-clad; composition roof; brick foundations; electric lights; separate brick boiler and engine-house; boiler, engine and machinery have been purchased; capital will be \$10,000, of which \$5000 will be invested in plant; no general contract will be awarded; work will be done "by the day" under supervision of owners.

Crawfordsville, Ga.—Ogeechee River Mills, R. C. Ogletree, manager, will establish corn mill; to be operated by water-power; machinery to cost about \$1000; capacity, 500 bushels of corn meal daily. (Recently mentioned. See "Machinery Wanted.")

Doniphan, Mo.—A. W. Dudley will establish grist and feed mill; has purchased building and will install 15-horse-power gas-oil engine, corn buhrs and feed crusher; contract for equipment awarded.

Malden, Mo.—E. T. Goldsmith will erect mill to replace burned plant; three rooms; 24x60 feet; ordinary construction; Wm. Bragg, engineer in charge. (Lately noted.)

New Florence, Mo.—New Florence Mill & Elevator Co., recently reported, has completed organization with A. H. Kallmeyer president and H. B. Kelsick secretary; capital stock \$38,000; will erect mill; three stories, 24x36 feet and 12x20 feet; mill construction; daily capacity, 50 barrels. (Recently reported under Florence. See "Machinery wanted.")

FOUNDRY AND MACHINE PLANTS

Atlanta, Ga.—Candy Machine.—Hudson Stick Candy Machine Co. incorporated with \$150,000 capital stock by W. T. Hudson, W. E. Dobbins, J. N. Trigg and others.

Chattanooga, Tenn.—Cahill Iron Works, Boyce and Hooke Sts., awarded contract to Adams & Schneider, 120 East 8th St., Chattanooga, for rebuilding two-story brick composition-roof foundry building and one-story brick composition-roof steam plant recently damaged by fire; steam plant, blowing engine, electric freight elevator and cupola will be repaired.

Dalton, Ga.—Stove Foundry.—D. C. Jones, Atlanta, Ga., has purchased and will organize company to operate plant of R. L. Mehaffey Stove & Manufacturing Co. at Dalton.

Eldorado, Ark.—Foundry.—Eldorado Foundry & Machine Co. organized with \$25,000 capital stock; J. W. Sander, president; J. H. Waters, vice-president; George S. Miles, secretary and treasurer.

Houston, Texas.—Locomotives, Cars, etc.—Grant Iron Works changed name to Grant Locomotive and Car Works; will eventually add manufacture of cars; department has been added for manufacturing steam and electric railway frogs, crossings and switches.

Sapulpa, Okla.—Boiler Works.—McGowan & Co., Cleveland, Okla., will establish boiler works at Sapulpa.

Shreveport, La.—Iron Works.—Shreveport Blow Pipe and Sheet Iron Works increased capital stock from \$10,000 to \$100,000.

Spartanburg, S. C.—Russell Machine Co., W. H. Russell, president and treasurer, recently reported incorporated with \$100,000 capital stock, has purchased Russell-Comp-ton Company, and will enlarge plant.

St. Louis, Mo.—Pulverizers.—American Pulverizer Co., 410 Mermad-Jaccard Bldg., will increase capital stock; contemplates improvements to plant.

St. Louis, Mo.—Pumps.—United Pump & Manufacturing Co. incorporated with \$50,000 capital stock by Clemens Westemeyer, Bernard H. Schulte, John J. Storr and others.

St. Louis, Mo.—Engines and Machines.—Robert Jacob Engine & Machine Co. incorporated with \$10,000 capital stock by Robert Jacob, Caroline Jacob and Andrew Mauer.

St. Louis, Mo.—Wire and Iron Foundry.—Roger-Schmidt Wire & Iron Co. incorporated with \$10,000 capital stock by W. Rolla Roger, E. E. Schmidt and Charles Weigand.

GAS AND OIL DEVELOPMENTS

Beaumont, Texas.—Lynn Oil Co. incorporated with \$10,000 capital stock by Lynn Gilbert, S. W. Pipkin, M. C. Averill and others; has taken over holdings of Sour Lake Oil Co., consisting of 471 acres of Sour Lake oil field.

Dallas, Texas.—Clem Ballard Oil Co. incorporated with \$20,000 capital stock by James A. Ballard, A. W. Clem and Thomas R. Tenant.

Denison, Texas.—C. E. Sturgis, W. J. Scott, F. Kohfeldt and others are interested in organization of company with \$6000 capital stock to develop oil deposits.

New Orleans, La.—Louis P. Rice, W. W. Boudin and Philip Werlein of New Orleans; Harry B. Hawes, G. H. Walker and Lewis B. Ely of St. Louis, Mo., and E. H. Everett of Washington, D. C., plan organization of corporation with capital stock of \$20,000,000 to pipe natural gas from Caddo Parish fields to New Orleans; distance, 300 miles; first 50 miles of pipe line to be 16 inches in diameter and then gradually increased to 20 inches at New Orleans; will build pumping or condensing stations; have purchased and leased 150,000 acres and wells, latter including two which are reported as having a daily flow of 100,000,000 feet of gas. Parties have applied for municipal franchise to distribute gas. Mr. Hawes is registered at St. Charles Hotel, New Orleans.

Orange, Texas.—Orange County Oil Co. organized with \$10,000 capital stock by W. H. Stark, E. W. Brown, J. W. Link and others; has oil rights on 249 acres.

Port Arthur, Texas.—Oil Pipe Line.—The Texas Company, main offices at Houston, Texas (in which John W. Gates is largely interested), is reported as to begin construction of proposed pipe line to convey oil from Oklahoma fields to its refineries at Port Arthur and Dallas; line to parallel one completed last year, be 500 miles long and cost \$500,000; also reported company will enlarge Port Arthur refinery and build another refinery. A dispatch from Houston says: "J. S. Cullinan, president of company, admitted company is preparing to extensively increase pipe-line facilities in North Texas. He said on certain sections of present pipe line a duplicate line of eight-inch pipe will be laid, but new pipe will be laid along exact route of present line. It is probable company will continue to install new-line intersection until old line is paralleled from oil fields to Gulf."

Romney, W. Va.—Interstate Natural Gas Co., Charleston, W. Va., has applied for franchise to supply Romney with natural gas for heating, light and power.

ICE AND COLD-STORAGE PLANTS

Clarksville, Ark.—Clarksville Ice & Gin Co. recently reported incorporated with \$15,000 capital stock, has completed organization with Joseph Evans president and J. J. Montgomery secretary and treasurer; has erected plant and will install \$12,000 worth of ice and gin machinery; capacity of ice plant, 10 tons daily.

Crowell, Texas.—Daugherty Bros., Alpine, Texas, reported to establish ice plant at Crowell.

Greer, S. C.—E. D. Green is interested in establishment of six-ton ice plant.

Granger, Texas.—Granger Oil Mill Co. has purchased artesian well and will establish \$35,000 ice plant and water-works system. (Recently noted under "Water-works.")

Hawkinsville, Ga.—Hawkinsville Ice & Coal Co. incorporated with \$20,000 capital stock by C. D. Davis, T. B. Ragan and H. E. Coates; will take over and improve plant of C. D. Davis.

Huntington, Ark.—Huntington Ice & Cold Storage Co., recently reported incorporated with \$10,000 capital stock, will erect ice room 15x25 feet and cold-storage room 30x25 feet; will install gravity brine system for cold storage; will not install ice-making machinery this season; estimated cost of plant \$1500. (See "Machinery Wanted.")

Jefferson, Texas.—Jefferson Ice, Light & Power Co. incorporated with \$50,000 capital stock by John T. McDonald, M. Bower and R. B. Walker.

Lagrange, Ga.—Lagrange Ice & Fuel Co. incorporated with \$20,000 capital stock by E. E. Eggleston, J. E. Dunson and I. M. Finley.

Louisville, Ky.—Crystal Ice & Cold Storage Co. incorporated with \$15,000 capital stock by E. L. Sheilden, J. L. Robison and L. W. Rodkey.

Parkersburg, W. Va.—Parkersburg Ice & Coal Co. incorporated with \$75,000 capital stock; A. B. White, president; T. S. Savage, vice-president; Frank Guthrie, secretary and treasurer; will take over Parkersburg Ice Co.; plant previously reported burned; will erect new building. (Recently mentioned.)

Parkersburg, W. Va.—Parkersburg Ice & Coal Co. incorporated with \$75,000 capital stock; A. B. White, president; T. S. Savage, vice-president; Frank Guthrie, secretary and treasurer; will rebuild burned plant; mill construction; brick; 35x157 feet; daily capacity, 80 tons ice; approximate cost of rebuilding, \$30,000; machinery is being rebuilt; R. L. Shipman, Ithaca, N. Y., consulting engineer.

Piedmont, W. Va.—Piedmont Artificial Ice

& Storage Co., organized by Z. T. Kelbaugh, awarded contract to Brady Construction Co., Piedmont, for erection of one-story concrete building.

Shiner, Texas.—E. F. Wolters, L. Trautwein and John F. Kasper awarded contract for erection of five-ton ice plant and creamery; power supplied by Trautwein & Wolters.

Stamford, Texas.—Stamford Ice & Refrigerating Co. increased capital stock from \$30,000 to \$50,000; will double capacity.

IRON AND STEEL PLANTS

Pessemier, Ala.—Iron Furnace.—Tennessee Coal, Iron & Railroad Co. will blow out No. 4 furnace for repairs; main offices at Birmingham, Ala.

Goshen, Va.—Iron Furnace.—Goshen Iron Co., lessee, DuPont Bldg., Wilmington, Del., has blown in Victoria Furnace.

Sheffield, Ala.—Rolling Mill.—H. H. Boyd of Memphis, Tenn., and James S. Pitcher, Nashville, Tenn., as trustees for City Bank of Memphis, American National Bank of Nashville and Sheffield National Bank, have purchased, at \$28,000, property of Sheffield Rolling Mill Co.; plans for future not decided.

Sheffield, Ala.—Iron Furnaces.—Sheffield Coal & Iron Co. incorporated with capital stock of \$3,250,000 by Edwin G. Rust, Sheffield; William R. Walker, Charles J. Fay and Jos. M. Hartfield, New York; William Edborn, New Orleans; Bendal Morgan, Philadelphia; Alfred Clifford, St. Louis; Edmund C. Converse, Greenwich, Conn., and Wm. M. Douglass, Allentown, Pa.; corporation will acquire company of same title which has been operating under receivership; has three furnaces with annual output of 210,000 tons of iron, and ovens with annual output of 200,000 tons of coke; working capital \$500,000, and will issue bonds for \$750,000. Edwin G. Rust is president, James Gayley vice-president; P. H. White, treasurer; New York offices at 7 Wall street.

LUMBER-MANUFACTURING PLANTS

Aransas Pass, Texas.—Brooke Lumber Co. incorporated with \$25,000 capital stock by Charles Wagy, Henry Brooks, A. E. Frankenburg and others, all of Ohio, Texas.

Atlanta, Ga.—Edward Haynes Lumber Co. incorporated with \$8000 capital stock by H. E. Haynes, J. W. Arnold, Grace Gourley and C. A. Carter.

Beaumont, Texas.—Trunbow Lumber Co. has increased capital stock from \$8000 to \$12,000.

Butler, Mo.—Logan Moore Lumber Co. has increased capital stock from \$175,000 to \$200,000; recently noted as having started construction of proposed plant at Hawthorne, La., consisting of sawmill, with planer and steam kiln, and have purchased 2,000,000 feet of timber near Hawthorne.

Covington, La.—Frederick & Singletary have sold several thousand acres of timber land at \$30,000 to Lake Superior Piling Co., which is reported as to undertake developments.

Delhi, La.—Planters' Industrial Institute, James Chambers Wilson, president, will establish saw, lathe and shingle mill. (See "Machinery Wanted.")

Dydersdale, Texas.—Bradford-Hicks Lumber Co., W. H. Bradford, president, Shreveport, La., recently incorporated with \$12,000 capital stock, has had plans prepared by J. J. Campbell, Dydersdale, for erection of millhouse and planer at Dydersdale; ordinary construction; daily capacity of 40,000 feet of lumber; cost \$7500; machinery all purchased. (Recently reported under Shreveport, La.)

Edmond, Okla.—Red Star Lumber Co. incorporated with \$10,000 capital stock by G. B. Farrar, E. L. Sheilden, J. L. Robison and L. W. Rodkey.

Goldsboro, N. C.—Goldsboro Planing Mill Co. incorporated with \$25,000 capital stock by J. T. Swisher, Goldsboro; H. P. Woodson and W. E. Graves of Lynchburg, Va.

Goldsboro, N. C.—Goldsboro Planing Mill incorporated with \$25,000 capital stock; H. P. Woodson, president; J. T. Swisher, vice-president; W. E. Graves, secretary.

Hondo, Texas.—Hondo Lumber Co. incorporated with \$12,000 capital stock by John M. Flinger, Horace Bradley and others.

Jeanerette, La.—St. Paul Bourgeois and Frank Beaulieu have, it is reported, purchased 5,000,000 feet of cypress timber and will develop; plan to cut out intervening gap between holdings bordering on canal and tract purchased and connect Iberia & St. Mary Canal with Bayou Teche.

Kansas City, Mo.—South Side Lumber Co.

incorporated with \$25,000 capital stock by J. S. Kirkpatrick, B. E. McEntire and C. J. Shostall.

Kansas City, Mo.—Sabine Lumber Co. incorporated with \$150,000 capital stock by J. W. Ferguson, J. P. Towery and N. N. Ashley.

Lauderdale, Miss.—Tartt Lumber Co. incorporated with \$30,000 capital stock by J. E. Tartt, Jim Miller and R. E. Wilbourn.

Macon, Ga.—Massee & Felton Lumber Co., previously noted to build another mill, will expend about \$250,000 for enlargements and improvements to plant.

Macon, Ga.—The Georgia Company incorporated with \$100,000 capital stock by T. W. Troy, M. H. Taylor and John Savarese.

Marble City, Okla.—Lyons Lumber Co. incorporated with \$10,000 capital stock by J. F. Bretz, R. C. Pigman and C. Hazlett.

Melville, S. C.—J. R. Paschal and Thomas Gresham, both of Charleston, S. C., have, it is reported, purchased 30,000 acres of timber land near Melville, and will establish mill to cut the timber.

Memphis, Tenn.—Russe & Burgess incorporated with \$150,000 capital stock; W. H. Russel, president; George D. Burgess, vice-president and treasurer; G. A. Farber, secretary; Hans Johansen, assistant secretary; company takes over sawmill, stock of lumber and accounts of Russe & Burgess and G. A. Farber.

Mt. Olive, Miss.—Whittle-Sorensen Lumber Co. incorporated by W. H. Whittle and S. N. Sorensen; will erect plant near Mt. Olive; frame with metal roof; ordinary construction; will install \$4000 portable outfit; capacity, 15,000 to 20,000 feet daily; J. T. Huyler, engineer in charge.

Paducah, Ky.—J. T. Morgan Lumber Co. incorporated with \$250,000 capital stock by J. T. Morgan, J. A. Morgan and J. F. Shellman.

Pearce Mills, Ala.—Jim Pearce will rebuild cotton gin and sawmill recently reported burned; 150x50 feet; stone; cost \$3500; Frank Allen, Pearce Mills, engineer in charge.

Port Arthur, Texas.—H. E. Smith and W. H. Showers, Crooksville, Ohio, contemplate establishment of \$10,000 planing mill at Port Arthur.

Savannah, Ga.—Vale Royal Manufacturing Co. will rebuild plant reported burned; loss about \$75,000.

St. Louis, Mo.—Foutch-Cook Sawmill Co. incorporated with \$10,000 capital stock by James Cook, James D. Foutch and S. C. Stephens.

St. Louis, Mo.—P. R. Walsh Tie & Timber Co. incorporated with \$25,000 capital stock by P. R. Walsh, F. E. Walsh and A. C. Hoppmann.

Tampa, Fla.—E. B. Anderson will erect \$5000 cedar mill.

Timber, Texas.—Miller-Vidor Lumber Co., Galveston, Texas, will rebuild sawmill and machine shop at Timber; reported burned at loss of about \$47,000.

Thomaston, Ga.—Name of company incorporated to purchase and operate plant of Marion Lumber Co. in Pretoria Sawmill Co.; company will develop between 20,000,000 and 25,000,000 feet of uncut lumber. (Reported last week as Pretoria Lumber Co.)

Wilson, N. C.—W. L. Russell Shook & Lumber Co. incorporated with \$50,000 capital stock by A. P. MacDonald of Wilson, W. L. Russell and W. H. Kuhn, both of Pittsburgh, Pa.

MINING

Alpine, Texas.—Marble.—Jordan Marble Quarry Co. organized with \$100,000 capital stock by John Young, Alpine; T. A. Coleman and D. J. Woodward, both of San Antonio, Texas.

Brookhaven, Miss.—Gravel.—Flint Gravel Co. incorporated with \$60,000 capital stock; M. D. McGrath, president, Brookhaven; W. D. Hannan, vice-president, Jackson, Miss.; C. M. McMahan, secretary, Brookhaven; has purchased 100 acres of gravel at Old Brook and will establish plant.

Llano, Texas.—Iron.—R. H. Downman, New Orleans, La., and Wakefield Iron Co., Minneapolis, Minn., are reported as having engaged Wm. B. Phillips, Birmingham, Ala., to examine and report on iron-ore properties near Llano, with a view of development; examiner will prospect by diamond core drilling, test pits and shafts.

Mineral, Va.—J. B. Woody contemplates development of gold deposits.

Rosedale, Ky.—Lead, Zinc and Barytes.—Mining company, represented by Walter L. Church, New York, has purchased Cunningham farm, containing lead, zinc and barytes ores, and will develop.

MISCELLANEOUS CONSTRUCTION WORK

Augusta, Ga.—Levee.—Nisbet Wingfield, commissioner, is preparing estimate of cost of construction of levee to protect city in future from floods; estimates are expected to be completed in two weeks, after which Flood Commission will meet and consider same, together with recommendation of Col. Dan C. Kingman, U. S. Engineer Office, Savannah, Ga., and E. M. Harrod, engineer, New Orleans, La.; levee will be about 12 miles long and roughly estimated to cost \$1,000,000.

Jeannerette, La.—Drainage.—Board of Commissioners Iberia and St. Mary's Drainage District ordered election to be held March 23 for voting on issuance of \$15,000 of bonds for constructing canal for drainage in sub-drainage district; J. C. Akers, president.

Kulckerbocker, Texas—Causeway.—Tom Green county has under consideration construction of concrete causeway; 25x11 feet, 3 feet at top, 7 feet at bottom; Mr. Hartman, San Angelo, engineer in charge.

Savannah, Ga.—Floodgate.—County Engineer Brown submitted plans to Albert Wally of Committee on Drainage for concrete floodgate, costing about \$5000, to be built at outlet of Dundee Canal into Savannah River; probable this work will soon be undertaken by Chatham county. (Previously mentioned.)

Stuttgart, Ark.—Pumping Plant.—Tindall & Prange have awarded contract for 275-horse-power Corliss engine and boilers, etc., to Southern Engine & Boiler Works, Jackson, Tenn., through H. H. Brooks, sales manager, Little Rock, Ark.; machinery to be installed in pumping plant on White River.

Texas City, Texas—Dock.—Wolvin Steamship Line, H. B. Moore, Texas City, general manager, is having plans prepared by engineer for improvements in warehouse, track and dock facilities.

Washington County, Texas—Irrigation.—J. D. Cameron, 1020 Commerce Bldg., Kansas City, Mo., has purchased Washington county lands as lately stated; has acquired a total of 555,000 acres at \$4.50 to \$30 an acre; plans not fully determined, but general purpose is to construct large dam for water supply and irrigation on Devil River in Val Verde county.

MISCELLANEOUS ENTERPRISES

Atlanta, Ga.—Mill and Railway Supplies.—T. Harbert Taylor, 419 Empire Bldg., has arranged to organize mill and railway supply Co. (See "Machinery Wanted.")

Baltimore, Md.—Garage.—Dixon C. Walker, care of Automobile Club of Maryland, Garage, Charles St. and Mt. Royal Ave., is having plans prepared by Jacob F. Gerwig, 210 East Lexington St., Baltimore, for garage at 1917-1919 North Charles street, recently mentioned; one story; ornamental facades; plate-glass show windows; terra-cotta and brick with stone trimmings.

Baltimore, Md.—Land Improvement.—Chas. J. Hull, 211 North Calvert St., has purchased and will develop tract of land on Annapolis road, near Baltimore, containing 266 acres; will subdivide into building lots and place on market; will cut streets and avenues through and make other improvements.

Baltimore, Md.—Wireless-telephone Station.—Atlantic Radio Wireless Telephone Co. will establish station on Union Trust Building; will erect tower 120 feet high; second tower will be on shore line 300 feet high, with 40-foot base on roof; seven others will be built in larger towns in Maryland, including Cumberland, Hagerstown, Frederick and Salisbury; will connect with all large cities in United States; Edwin Sydney Canman, engineering director, Union Trust Bldg.; cost about \$500,000.

Binghamton, Station Memphis, Tenn.—J. M. Trenholm & Co. will establish grain elevator; will erect \$10,000 structure; machinery operated by electricity; spur track will be constructed from Louisville & Nashville Railroad to plant.

Birmingham, Ala.—Land Improvement.—Park Investment Co. incorporated with \$7500 capital stock by Hiram Abramson, Sam Greene and George Huddleston.

Birmingham, Ala.—Sheet-metal Roofing.—Bain & Hinkler Roofing & Cornice Co. incorporated with \$20,000 capital stock; C. A. Bain, president; B. L. Hinkler, vice-president; B. E. Hinkler, secretary and treasurer.

Brevard, N. C.—Land Improvement.—Brevard Land & Timber Co. incorporated with \$125,000 capital stock by M. Buchanan, W. Zachary and J. M. Zachary.

Bristol, Va.-Tenn.—Land Improvement.—Allen Realty Corporation incorporated with

\$10,000 capital stock; C. B. Allen, president, Johnson City, Tenn.; C. M. Allen, vice-president; B. S. Gore, secretary and treasurer, both of Bristol.

Brownsville, Tenn.—Farmers' Hardware & Furniture Co. incorporated with \$5000 capital stock by H. M. Felsenthal, J. L. Sternberger, John Fritch and others.

Clayton, Mo.—Publishing.—McKibbin Publishing Co. incorporated with \$10,000 capital stock by R. L. Johnson, A. C. McKibbin, C. S. Stevens and others.

Clinton, Mo.—Publishing.—Henry County Republican Printing Co. incorporated with \$5000 capital stock by M. B. Conrad, R. V. Felhauer and J. D. Felhauer.

Columbia, S. C.—Publishing.—Columbia Evening Sun Co. incorporated with \$25,000 capital stock by James A. Hoyt and associates; purchased and will operate plant of Record Publishing Co.

Crisfield, Md.—Wireless Telegraph.—Company organized with \$20,000 capital stock to operate wireless-telegraph system between Crisfield and adjacent islands in Chesapeake Bay; plant to be installed by United Wireless Telegraph Co., W. R. Ashby, agent, 1007 American Bldg., Baltimore, Md.; main station at Crisfield; pole will be placed to hold connecting wires, which take up electrical atmospheric current for direct contact with outlying districts; at each of outlying points to be reached there will be a station similarly equipped; for short distances only small portable instruments will be used.

Culpeper, Va.—Publishing.—Culpeper News incorporated with \$10,000 capital stock; Edwin H. Gibson, president; M. B. Turbyfill, vice-president; W. A. Bickers, secretary and treasurer.

Dallas, Texas—Laundry and Dye Works.—Dallas Steam Laundry and Dye Works incorporated with \$10,000 capital stock by Geo. S. Leachman, L. S. Leachman and Thomas Leachman.

Dyersburg, Tenn.—Land Improvement.—Ridgely Land Co. incorporated by A. E. Menzies, C. C. Moss, J. C. White and others.

Emporia, Va.—Publishing.—Independent Publishing Co., W. W. Green, president, recently reported incorporated with \$10,000 capital stock, will establish printing plant; will install \$2000 worth of machinery. (See "Machinery Wanted.")

Emporia, Va.—Publishing.—Independent Publishing Co. incorporated with \$10,000 capital stock; W. W. Green, president, Richmond, Va.; C. F. Johnson, vice-president; C. H. Sebrell, secretary and treasurer, both of Emporia.

Ensley, Ala.—Steam Laundry.—Sheldon Laundry Co. incorporated with \$10,000 capital stock; John Sheldon, president; I. A. Miller, secretary and treasurer.

Fairfax, Mo.—Hardware and Implements.—M. Mahon Hardware & Implement Co. incorporated with \$3000 capital stock by W. H. Wright, R. Gade, M. P. Beck and others.

Fayetteville, W. Va.—Mercantile.—W. B. Jones Company incorporated with \$10,000 capital stock by W. B. Jones, S. L. Walker, A. W. Hamilton and others.

Fort Worth, Texas—Hardware.—Citizens' Hardware Co. incorporated with \$7000 capital stock by J. W. Strain, J. P. Shirley and B. M. Frazer.

Glouster Point, Va.—Printing Plant.—Glouster Tribune will issue bonds for erection and equipment of printing plant at Glouster Point.

Greensboro, N. C.—Mercantile.—Buffalo Furniture Co. incorporated with \$25,000 capital stock by E. W. Kornegay, W. P. Kornegay and Ernest Boyles.

Greenwood, Miss.—Crematory.—City contemplates installation of garbage crematory. Address Mayor Montjoy.

Jackson, Miss.—Land Improvement.—Consolidated Land & Investment Co. incorporated with \$10,000 capital stock by A. L. Bradley, R. L. Bradley and L. B. Cheatham.

Jacksonville, Fla.—Land Improvement.—Investment Co. of Florida incorporated with \$10,000 capital stock; F. G. Rush, president; John A. Whitner, Jr., vice-president; Geo. W. Mills, secretary and treasurer.

Jeanerette, La.—Mercantile.—Silverman Company, Ltd., incorporated with \$6500 capital stock; Louis Silverman, president; Nathan Silverman, treasurer and manager; Isaac Silverman, secretary.

Kansas City, Mo.—Printing.—Daily Drovers' Telegram, J. N. Neff, manager, has had plans prepared by Herman J. Stroeh, Kemper Bldg., Kansas City, for erection of printing plant; 36x130 feet; three stories; fireproof; concrete; cost \$30,000. (Recently noted. See "Machinery Wanted.")

Kansas City, Mo.—Land Improvement.—

Canadian Realty & Securities Co. incorporated with \$12,000 capital stock by Erva S., James L. and A. E. Lombard.

Kansas City, Mo.—Public Improvements.—City will vote April 6 on bond issues as follows: Park Improvements, \$750,000; incinerator plant, \$300,000. Address The Mayor.

Little Rock, Ark.—Publishing.—Union Poetry Journal Publishing Co. incorporated with \$5000 capital stock; Wm. E. Overstreet, president; L. A. Hockersmith, vice-president; G. C. Watkins, secretary and treasurer.

Louisville, Ky.—Engineering.—Associated Engineering Co. incorporated with \$15,000 capital stock by John H. L. Vogt, Herman F. Scholtz and Oluf G. Peterson.

Louisville, Ky.—Contracting.—Staebler & McFarland Company incorporated with \$5000 capital stock by C. W. McFarland, Joseph M. Staebler and T. J. McFarland.

Macon, Miss.—Farming.—Noxubee Farming Co. incorporated with \$25,000 capital stock by Lyman Carrier, Blacksburg, Va.; G. E. Tower, Orono, Maine, and others.

Maxton, N. C.—Land Improvement.—Maxton Realty Co. incorporated with \$50,000 capital stock by H. C. McNair, W. S. McNair and J. F. McNair.

Memphis, Tenn.—Mercantile.—Ryder-Sampson Company incorporated with \$10,000 capital stock by S. S. Ryder, J. A. Sampson, Leo Goodman and others.

Mt. Jackson, Va.—Garage.—Standard Garage Co. incorporated with \$5000 capital stock; E. Hickman, president; J. L. Wissler, secretary and treasurer.

Murphy, N. C.—Mercantile.—Owenby-Wafford Co. incorporated with \$100,000 capital stock by W. G. Owenby, E. J. Darnell, both of Murphy, and C. M. Wafford, Nelson, Ga.

Nacona, Texas—Hardware and Implements.—Thurston Hardware & Implement Co. incorporated with \$15,000 capital stock by Charles A. Hood, Charles E. Quillen and others.

Nashville, Tenn.—Land Improvement.—E. T. Brown has purchased and will subdivide tract of land containing about 54 acres.

New Orleans, La.—Sugar Mills.—Kenilworth Sugar Co. incorporated with capital stock of \$500,000; reported as combining 14 sugar plantations and sugar mill at Kenilworth; latter has equipment for manufacturing paper from bagasse; Eugene A. Pharr, president; J. E. Burgieres, vice-president; Jules M. Burgieres, treasurer.

New Orleans, La.—Transfer.—Pelican Transfer Co. incorporated with \$3000 capital stock; W. S. Bender, president; G. E. Gillis, vice-president; Charles A. Duchamp, secretary and treasurer.

New Orleans, La.—Transportation.—Ponchartrain Transport Co. incorporated with \$100,000 capital stock; J. R. Downman, president; B. D. B. Dixon, vice-president; W. C. Wilson, secretary; will operate steamboat on Lake Ponchartrain, connecting West End points in St. Tammany and Gulf coast towns.

New Orleans, La.—Land Improvement.—Southern Garden & Townsite Co. incorporated with \$50,000 capital stock; J. E. Gillis, president; J. A. Blythe, vice-president; Char S. Montz, secretary and treasurer; will develop 625 acres of land on proposed New Orleans & Seashore Air Line; 125 acres for townsite; 500 acres for truck gardens.

Newport, Ark.—Land Improvement.—Jackson County Land Co. incorporated with \$3000 capital stock; C. M. Erwin, president; H. S. Simmons, vice-president; C. G. Henry, secretary and treasurer.

Newton, N. C.—Land Improvement.—Newton Land & Loan Co. incorporated with \$50,000 capital stock by J. O. Gaither, W. B. Fry and W. B. Gaither.

Norfolk, Va.—Wireless-telegraph Station.—Atlantic Radio Co., Edward Canman, representative, will establish wireless telegraph and telephone station on Board of Trade Building; will construct tower and pole 300 feet high.

Oklahoma City, Okla.—Steam Laundry.—Jett White Laundry Co. will erect two-story brick steam laundry.

Oklahoma City, Okla.—Contracting.—Lindley-Kirk Construction Co. incorporated with \$250,000 capital stock by T. H. Lindley, J. E. Kirk and M. L. Lindley.

Pensacola, Fla.—Naval Stores.—Saunders Company incorporated with \$50,000 capital stock; Dudley R. Saunders, president; J. L. Sowell, Jr., and Irving Post, vice-presidents; Richard B. Saunders, secretary and treasurer.

Pritchard, Ala.—Abattoir.—A. D. Davis and John Cowley, both of Mobile, Ala., will erect abattoir at Pritchard; contract for machinery awarded.

Richmond, Va.—Credit Registers.—Leer

Sales Co. incorporated with \$50,000 capital stock; Joseph D. Locke, president; Young Jones, secretary and treasurer, both of Richmond; Joseph P. Bryan, vice-president, Talbot county, Maryland.

Richmond, Va.—Gas Mains and Incinerator.—Finance Committee in budget for 1909, submitted to City Council, included \$25,000 for extension of gas mains and \$40,000 for new incinerator plant; Charles E. Bolling, City Engineer.

San Antonio, Texas—Automobiles.—Lemly-Wood Brownlee Auto Co. incorporated with \$15,000 capital stock by F. H. Lemly, J. R. Wood and J. A. Brownlee.

Saltpulpa, Okla.—Laundry.—Barber & Thomas will erect two-story brick building to cost \$12,000 and install steam laundry equipment.

Savannah, Ga.—Land Improvement.—Realty & Construction Co. incorporated with \$300,000 capital stock by Aaron R. Altmayer and Marvin C. Altmayer, both of New York.

Sedalia, Mo.—Publishing.—Botz & Sons Publishing Co. incorporated with \$30,000 capital stock by Charles J. Botz, Otto C. Botz, Frank C. Botz and others.

Shannon, Miss.—Mercantile.—Boozier-Wlygu Company incorporated with \$6000 capital stock by J. P. Boozer, J. P. and I. G. Wlygu.

Springfield, Mo.—Hide, Junk, Concrete, etc.—Springfield Hide, Junk & Concrete Co. incorporated with \$21,000 capital stock by B. F. Teagarden, F. G. Page and U. S. Teagarden.

St. Louis, Mo.—Land Improvement.—Julia Realty Co. incorporated with \$7000 capital stock by Julia Hacker, John A. Hacker and Joseph M. Hacker.

St. Louis, Mo.—Printing Plant.—Con P. Curran Printing Co. has had plans prepared by Mariner & LeBeaume, St. Louis, for printing plant; six stories; reinforced concrete; fireproof throughout; 75x127 feet; cost of building about \$250,000; cost of machinery about \$35,000.

St. Louis, Mo.—Steam Laundry.—A. Heisel Laundry Co. incorporated with \$9000 capital stock by Alonzo Heisel, Arthur O. Heisel and Mrs. Emma Heisel.

St. Louis, Mo.—Lithographing.—Isler-Tompsett Lithographing Co. incorporated with \$25,000 capital stock by M. J. Isler, J. M. Tompsett, M. A. Rudloff and others.

Sweetwater, Texas—Land Development.—Leon Valley Irrigated Land Co. incorporated with \$70,000 capital stock by Tyron Lewis, S. J. Alexander and M. W. McGinnis.

Talleyrand (not a postoffice), Fla.—Drying Plant.—Dutton Phosphate Co., C. W. Chase, president, Gainesville, Fla., recently noted (under Jacksonville, Fla.) to establish drying plant, will expend about \$75,000 for erection of temporary terminals; permanent terminals to cost about \$250,000; completed plant to have capacity of 5000 tons phosphate rock daily; other extensive improvements contemplated, including strengthening and enlarging present docks and erection of piers for deep-draft foreign ships.

Tampa, Fla.—Dairy.—Tampa Dairy Co., W. J. Barrin, president and manager, recently noted awarding contract to Friend & Gattman, Tampa, will erect brick structure; 43x48 feet; one and a half stories; capacity 1000 gallons of milk and cream; cost of building, \$3500; cost of machinery, \$3000; will install ice plant with capacity of 15 or 20 tons. (See "Machinery Wanted.")

Vicksburg, Miss.—Contractors' Supplies.—Contractors' Supply Co. incorporated by J. P. March, T. M. Folkes and others.

Vinita, Okla.—Land Improvement.—Wilson Street Realty Co. incorporated with \$7500 capital stock by F. G. Cowen, D. P. Garrick and F. S. E. Amos.

Waiteville, Va.—Land Improvement.—Waiteville Land Co. organized to develop lands for dwelling and industrial purposes; J. L. Vaughn, president, Roanoke, Va.; P. W. Early, secretary, Interior, Va., and A. M. Crosley, treasurer, Waiteville.

Washington, D. C.—Land Improvement.—R. Holt Easley and William D. Hill, both of Easley & Hill, 24-25 Jordan Bldg., Washington, have representatives of Virginia syndicate, who purchased Bleak House, Claggett farm, old Van Rensselaer homestead and Patterson tract; about 300 acres; will subdivide into building lots.

Weatherford, Texas.—Sallaska-Fast Company incorporated with \$30,000 capital stock by John Y. Sallaska, George G. Fast and Henry H. Wohlgemuth.

Winchester, Ky.—Steam Laundry.—Winchester Steam Laundry Co. incorporated with \$7000 capital stock by C. S. Guy, R. J. Tooney, L. A. Ramsey and others; will operate established plant.

Wilmington, N. C.—Metal Work.—Please Bros. Co. incorporated with \$5000 capital

stock by E. J. Prease, T. B. Prease, W. B. Klauder and T. S. Young.

MISCELLANEOUS MANUFACTURING PLANTS

Ashboro, N. C.—Gloves.—Wm. C. Rush & Co. will establish plant for manufacturing gloves.

Baltimore, Md.—Caps.—Friedburg Cap Co. has leased space in building at 613 East Baltimore street and will equip for manufacturing caps.

Bartow, Fla.—Fertilizer.—Wilson & Toomer, Jacksonville, Fla., will, it is reported, establish fertilizer plant at Bartow.

Birmingham, Ala.—Creosoting Plant.—Robert R. Zell & Co. will, it is reported, establish creosoting plant near Birmingham.

Birmingham, Ala.—Drugs.—Barber-Ramsey Drug Co. incorporated with \$15,000 capital stock; Don J. Barber, president; Vernon B. Ramsey, secretary and treasurer; W. H. Griswold, vice-president.

Blackwell, Okla.—Cigars.—Oklahoma Cigar Co. incorporated with \$10,000 capital stock by S. C. Sparks, S. A. Sparks A. Sparks and S. M. Thayer.

Butler, Ga.—Fertilizer.—Butler Fertilizer Co. organized with \$8000 capital stock; C. N. Neisler, president; I. F. Peebles, first vice-president; J. J. Windham, second vice-president; H. J. Peagler, secretary and treasurer; will establish fertilizer factory, cotton gin and cotton warehouse.

Chattanooga, Tenn.—Hemlock Baking Co. incorporated with \$10,000 capital stock by F. Reese Woolford, A. J. Chilcut, D. H. Brown and others.

China Grove, N. C.—Fire and Burglar Alarms, etc.—Patent Monarch Alarm Co., recently reported incorporated, has organized with \$100,000 capital stock; W. B. Gobel, president; F. W. Bost, secretary and treasurer; has had plans prepared by W. B. Gobel, China Grove, for plant; one building; two stories; 100x200 feet; mill construction, and several smaller buildings; cost \$15,000; machinery to cost \$30,000; capacity, 500 alarms; F. W. Bost, engineer in charge.

Clarksville, Tenn.—Tobacco.—Hambaugh-Manson Tobacco Co. incorporated by H. O. Hambaugh, H. C. Manson and C. B. Lyle.

Columbus, Miss.—Comforts.—W. W. Garth has purchased Columbus Comfort Manufacturing Co. plant; will reorganize company and resume manufacturing.

Corinth, Miss.—Overalls, etc.—Alcorn Overall Co. incorporated with \$30,000 capital stock by John H. Jones, Sr., John H. Jones, Jr., both of Corinth, and V. Nixon, Atlanta, Ga.

Crowley, La.—Water Elevator.—D. D. Dennis, Leesville, La., is planning establishment of plant in Crowley for manufacturing patented water elevator, an irrigation device for lifting water from deep wells for rice irrigation.

Dallas, Texas—Plaster, etc.—Texas Cement Plaster & Supply Co. incorporated with \$40,000 capital stock; H. A. Shannon, president; J. R. Neece, vice-president; J. H. Overton, secretary and treasurer; will manufacture hard wall plaster, wood-fiber plaster, plaster board, etc.

Dallas, Texas—Shoes.—St. Louis Shoe Co., St. Louis, Mo., contemplates establishment of shoe factory at Dallas.

Durham, N. C.—Marble Plant.—T. O. Sharp Marble & Granite Co. incorporated with \$50,000 capital stock; J. M. Manning, president; T. O. Sharp, vice-president; R. M. Tallaferro, secretary and treasurer; has purchased, will enlarge and operate plant of T. O. Sharp.

Elberton, Ga.—Gloves and Overalls.—G. W. Hubbard and associates propose to establish canvas-glove and overalls factory; machinery not purchased. (See "Machinery, etc., Wanted.")

Enid, Okla.—Butter.—Continental Butter Co. has taken over and will operate plant of New State Butter Co.; will improve entire plant; additional processes and machinery, including vats, new churns, pasteurizer, etc., will be installed and output increased to 1,000,000 pounds of butter annually.

Falls City, Texas—Drugs.—Falls City Drug Co. incorporated with \$5000 capital stock by A. F. Pawelk, Isidor Pawelk and G. W. Sims.

Fort Worth, Texas—Glass.—J. C. Madden, Sr., will reorganize J. C. Madden, Inc., with J. C. Madden, Sr., president; J. C. Madden, Jr., secretary and treasurer, and will rebuild plant recently reported burned; corrugated iron over frame structure; capacity, 400 gross glass bottles daily; will install engine, generator, fans, ventilators, compressors and lathes; plans by J. C. Madden, Jr., Fort Worth; cost \$20,000. (See "Machinery Wanted.")

Fort Worth, Texas—Wire Fencing Material Company will be organized with \$50,000 capital stock by T. K. Blewitt, Denton, Texas, to establish plant for manufacturing woven wire fencing materials.

Gainesville, Fla.—Paper.—C. W. Chase, B. F. Williamson and others are organizing company to build paper mill reported in January; to manufacture from stumps of dismantled pines. (Previous item reported \$2,000,000 as contemplated cost of plant and that New England capitalists are interested.)

Gravette, Ark.—Fruit Evaporator.—Rodgers Revolving Fruit Evaporator Co. organized with \$50,000 capital stock; A. M. Rodgers, president; E. W. Cato, vice-president; A. E. Kindley, secretary; J. F. Dorsett, treasurer.

Grigsby Island (not a postoffice), La.—Oil Refinery.—The Texas Company, Houston, Texas, has purchased Grigsby Island, containing about 1000 acres, and will, it is reported, establish skimming plant or refinery.

Gulfport, Miss.—Candy.—Jones-Colmer Candy Co. organized with \$10,000 capital stock; H. Colmer, general manager; H. H. Elbert, superintendent.

Hartwell, Ga.—Fertilizer.—Farmers' Cotton & Fertilizer Co., recently reported incorporated, has organized with C. Linder, president; J. E. Carter, general manager; J. L. Teasley, secretary and treasurer; will establish fertilizer-mixing plant. Recently noted under "Miscellaneous Enterprises." (See "Machinery Wanted.")

Houston, Texas—Wall Board and Roofing. Mastic Wall Board & Roofing Co., New Orleans, La., proposes establishment of plant in Houston for manufacturing wall board and roofing.

Humboldt, Tenn.—Beverages.—Johnson Bros., Trenton, Tenn., will establish plant for manufacturing soft drinks; construction has begun.

Jacksonville, Fla.—Automobiles.—McGraw Bros. & Vogt incorporated with \$12,000 capital stock; J. E. McGraw, president; Jacob Vogt, vice-president; D. W. McGraw, secretary and treasurer.

Kansas City, Mo.—Oscar Mindrup will erect factory building, to be occupied by Burnham-Munger Manufacturing Co.

Kansas City, Mo.—Upshaw Manufacturing Co. incorporated with \$50,000 capital stock by George Upshaw, W. C. Hicks and J. O. Walker.

Knoxville, Tenn.—Trousers.—Smith Neal & Co. have changed name to High Art Trousers Co. and increased capital stock from \$20,000 to \$40,000.

Knoxville, Tenn.—Clothing.—Little Bros. have had plans prepared by Baumann Bros., Knoxville, for additional story to factory building.

Lagrange, Ga.—Automobiles.—Southern Automobile Manufacturing Co., lately reported organized with F. M. Ridley, Jr., president, has had plans prepared by C. E. Stewart, Atlanta, Ga., for erection of plant; 100x300 feet; brick; daily capacity three automobiles per day of heavy type; estimated cost \$30,000. (See "Machinery Wanted.")

Lawrenceville, Va.—Drugs.—Lewis-Mallory Drug Co. incorporated with \$5000 capital stock; E. R. Turnbull, president; W. H. Lewis, vice-president; F. N. Mallory, secretary and treasurer.

Leeds, Mo.—Traps and Targets.—Ideal Trap & Target Co. has purchased site and will erect two factory buildings; 75x100 feet and 20x40 feet; company manufactures traps and targets.

Lexington, Ky.—Tobacco.—Bluegrass Tobacco Works incorporated with \$300,000 capital stock; John D. Moore, Detroit, Mich., president; W. J. Loughridge, Lexington, vice-president; reorganization of Bluegrass Tobacco Co.

Louisville, Ky.—Optical Goods.—Southern Optical Manufacturing Co. incorporated with \$50,000 capital stock by Carl M. Wiseman and W. J. Polk.

Lumberton, N. C.—Soda Water, etc.—Robeson Soda Water Co., Robert E. Lee, president, recently reported incorporated with \$5000 capital stock, will erect plant for manufacturing soda water, ginger ale and other non-alcoholic beverages. (See "Machinery Wanted.")

Marshall, Texas—Glass.—United States Glass Co., Robert Ballentine, representative, Washington, Pa., contemplates, it is reported, establishment of glass factory at Marshall.

McAlester, Okla.—Gloves.—McAlester Glove Manufacturing Co. incorporated with \$3000 capital stock by D. J. O'Grubbs, J. R. Hurley, E. C. White and others.

Memphis, Tenn.—Safety Device.—A. Strange Safety Main Line Switch Lock Co. organ-

ized by William Anderson and others to establish plant for manufacturing safety switch lock patented by Mr. Anderson.

Memphis, Tenn.—Marble Works.—Marius Bros. & Co. Marble Works, Atlanta, Ga., will, it is reported, establish plant in Memphis.

Norfolk, Va.—Drugs.—Strole Drug Co. incorporated with \$25,000 capital stock; J. L. Strole, president; C. E. Crawford, vice-president; A. S. Crawford, secretary and treasurer.

Norfolk, Va.—Chewing-gum.—Travelers' Gum Corporation organized with \$25,000 capital stock by Phil Roskam; to manufacture chewing-gum.

Norfolk, Va.—Drugs.—Strole Drug Co. incorporated with \$25,000 capital stock; J. L. Strole, president; C. E. Crawford, vice-president; A. S. Crawford, secretary and treasurer.

North Wilkesboro, N. C.—Absher Bros. Company incorporated with \$25,000 capital stock by M. M. Absher, H. O. Absher, S. E. Absher and others.

Ola, Ark.—Drugs.—Ola Drug Co. incorporated with \$10,000 capital stock; N. E. Towell, president; J. H. Pullen, vice-president; C. W. Towell, secretary and treasurer.

Pocahontas, Ark.—Brooms.—J. D. Jackson and James Graham will establish broom factory; will operate two machines.

Pointe Coupee, La.—Sugar.—Alma Plantation has awarded contract to Whitley Iron Works, New Orleans, for construction of sugar mill; daily capacity 450 tons for present season; arranged so that addition of crusher will increase grinding capacity to 1000 tons per 24 hours.

Raleigh, N. C.—Drugs.—Acme Drug Co. incorporated with \$50,000 capital stock by W. C. Douglas, E. B. Barbee, W. B. Douglas and others.

Salem, Va.—Signaling Device.—Patrick Train Controlling Corporation incorporated with \$300,000 capital stock; G. E. Patrick, president; Charles D. Denit, secretary; will manufacture patented invention for signaling trains.

Savannah, Ga.—Automobiles.—M. Ed Wilson contemplates organization of company with \$350,000 capital stock to establish automobile factory.

San Benito, Texas—Sugar Mill.—San Benito Sugar Co. incorporated with \$10,000 capital stock by Alba Heywood, S. A. Robertson and R. L. Batts; will establish sugar mill.

Seneca, S. C.—Water Elevators, etc.—J. L. O. King has patents for buggy wheel kept tight by hand wrench and water elevator for wells; contemplates arranging for their manufacture. (See "Machinery Wanted.")

Sheffield, Ala.—Tannery.—S. P. Orr, Sheffield, and E. W. Graves, Iron City, Ala., will establish tannery in Sheffield.

Shiner, Texas—Creamery.—E. F. Wolters, L. Trautwein and John F. Kasper awarded contract for erection of creamery. (See "Ice and Cold Storage Plants.")

Staunton, Va.—Creamery.—Augusta County Creamery awarded contract to W. B. Johnson, Staunton, for erection of proposed creamery building; 26x50 feet; one story; concrete block; cost \$1500. (Recently noted as having awarded contract to Clem Bros., Staunton, for power and cold storage.)

St. Joseph, Mo.—Cigars.—Pereog & More Cigar Co. incorporated with \$30,000 capital stock by B. C. Pereog, F. E. Shephard, A. E. Brock and others.

St. Louis, Mo.—Envelopes.—Envelope Manufacturing Co. incorporated with \$15,000 capital stock by M. J. Moulton, D. J. Galvin and C. F. Pfanzle.

St. Louis, Mo.—Coyle Manufacturing Co. incorporated with \$10,000 capital stock by Thos. M. Coyle, John C. Rader and W. Scott Hancock.

Stuttgart, Ark.—Rice Mill.—Stuttgart Rice Mill Co. awarded contract to Southern Engine and Boiler Works, Jackson, Tenn., through H. H. Brooks, sales manager, Little Rock, Ark., for improvements (recently noted) to rice mill at Stuttgart; improvements will include 400-horse-power Corliss engine, boilers, heaters, pumps, etc.

Tallassee, Ala.—Fertilizer.—Tallassee Oil & Fertilizer Co. organized with \$50,000 capital stock; S. P. Storrs, president. (See "Cottonseed-oil Mills.")

Tyler, Texas—Creamery.—Commercial Club is interested in establishment of creamery at Tyler.

RAILWAY SHOPS, TERMINALS, ROUNDHOUSES, ETC.

Bristol, Tenn.—Virginia & Southwestern Railway will not enlarge shops at Bristol; recently incorrectly reported.

Eureka, Texas—Missouri, Kansas & Texas Railway, J. W. Petheram, Dallas, Texas, chief engineer, will locate new yard at Eureka; six or eight tracks, each one mile long, will be laid. (See item under Houston, Texas.)

Houston, Texas—Missouri, Kansas & Texas Railway will expend between \$70,000 and \$80,000 in improvements in vicinity of Houston; work contemplated includes new roundhouse, trackage, turntable, remodeling of freight station at cost of about \$7800, etc.; new yard at Eureka; J. W. Petheram, chief engineer, Dallas, Texas, will have general charge of improvements; F. W. Bailey, superintendent of bridges and buildings, Denison, Texas, will supervise work.

Jellico, Tenn.—Louisville & Nashville Railroad, W. H. Courtenay, chief engineer, Louisville, Ky., will, it is reported, erect railway shop at Jellico.

Ruston, La.—Chicago, Rock Island & Pacific Railway, J. B. Berry, chief engineer, Chicago, Ill., and Vicksburg, Shreveport & Pacific Railway (Queen & Crescent Route), A. A. Woods, resident engineer, Vicksburg, Miss., reported to expend \$60,000 in improvements at Ruston, including coal chutes, erection of union passenger station to cost \$30,000, and brick freight depot to cost \$15,000.

Smithville, Texas—Missouri, Kansas & Texas Railway, S. B. Fisher, consulting engineer, St. Louis, Mo., has appropriated \$450,000 for current year for repair and new work on South Texas division; of this, Smithville receives \$20,000 for new station, \$25,000 for gravel, \$2000 for turntable, \$1350 for 1350 feet of repair track, etc.

ROAD AND STREET IMPROVEMENTS

Baltimore, Md.—City will grade, curb, gutter and pave Remington and First avenues, from 29th street to Cedar avenue, and 30th street, from Huntington to Remington avenue; James H. Smith, president Commissioners for Opening Streets. (See "Machinery Wanted.")

Baltimore, Md.—Board of Public Improvements approved ordinance to repave Fremont avenue, between Pratt and Baltimore streets; Carey street, between Lexington street and Columbia avenue, and Mount street, between Preston street and Westwood avenue; to open 7th street, between Edmondson and Westwood avenues. Details will be announced later.

Basic City, Va.—H. M. Magie, secretary Augusta, Nelson and Albemarle Counties Co-operative Road Improvement Association, First National Bank Bldg., Waynesboro, Va., is in charge of preliminary work on Rockfish road to be constructed from Basic City over Blue Ridge Mountains to Brookville, Va.; road will be 7.21 miles long, 20 feet wide, with 12-foot macadam bed, 6-inch finished thickness; underdrained; concrete curbs, etc.; contract will be awarded next month; total amount available, \$20,500. (Recently mentioned. See "Machinery, etc., Wanted.")

Brady, Texas—City awarded contract to A. Lewis of Brady for grading 65 blocks, 38 of which he will also macadamize; cost about \$14,000. (Recently mentioned.)

Chattanooga, Tenn.—Chickamauga Park Commission, E. E. Betts, engineer in charge, 905 and 906 James Bldg., Chattanooga, expects to secure rights of way and complete surveys in one month for roadway from Lookout Mountain at St. Elmo, Tenn., to Rossville, Ga.; four miles; steel bridge will be advertised for later.

Franklin, La.—City will construct about 28,500 square feet cement sidewalks and 5200 linear feet brick curbing on Main street; contract awarded to Gally & Clark, Alexandria, La.

Gainesville, Ga.—City Council is considering paving Main, Bradford, Spring, Washington and Broad streets. Address The Mayor.

Hampton, Va.—Supervisors of Elizabeth City county will construct stone boulevard from Hampton to Newport News.

Hillsboro, N. C.—T. D. Scruggs, Durham, N. C., has contract to grade three miles of road to be constructed from Hillsboro to southern township line, at cost of about \$6000; Gilbert C. White, Durham, N. C., is engineer in charge. Mr. White is now arranging specifications for grading roads in Alamance county and will soon advertise for proposals. (This is correct statement of improvements lately mentioned under Hillsboro and Graham.)

Hot Springs, Ark.—City contemplates issuing \$30,000 bonds for road and street improvements; F. V. P. Ellsworth, City Engineer.

Jonesboro, Tenn.—Washington County Road Commissioners adopted routes and mileage for roads to be constructed with \$150,000 bond issue recently mentioned; total of 37 miles.

Kansas City, Mo.—City will vote April 6 on issuance of \$4,500,000 of bonds, \$50,000 to be expended for street-repair plant and 125,000 for market square. James L. Darnell, City Engineer.

Lafayette, Ala.—Chambers County Commissioners will construct road from Lafayette to Lanett; will open grading bids on April 5; plans and specifications at office of A. J. Driver, Jr., Judge of Probate. (See "Machinery Wanted.")

Loch Raven, Md.—Maryland School for Boys awarded contract to Arthur L. Shreve & Co., 331 Dolphin St., Baltimore, at \$10,470 for road construction.

Montgomery, Ala.—Montgomery county will vote March 25 on issuance of \$150,000 of road and bridge bonds. (Previous election illegal.) Address County Commissioners.

Richmond, Va.—Finance Committee has prepared budget for 1909, which will soon be presented to Council; work includes curbing and guttering, \$30,000; paving sidewalks, \$45,000; grading and paving streets with granite spalls, \$75,000, etc.; Charles E. Bolling, City Engineer.

Roanoke, Va.—Roanoke County Civic Betterment Club to expend \$10,000 for road improvements in county; city will supplement this amount with \$2500.

Rockville, Md.—Montgomery County Commissioners awarded contract to McKay Construction Co., Philadelphia, Pa., for construction of road from Kensington to Bradley lane, Chevy Chase, a distance of three and one-quarter miles; specifications call for 14-foot road from Bradley lane to Chevy Chase Lake and 12-foot road from lake to Kensington; cost estimated at \$31,000, one-half to be contributed by State, \$8500 secured by bond issue and remainder by private subscriptions.

Savannah, Ga.—City Council will probably adopt ordinance authorizing paving of Cohen and Hull streets; John W. Howard, City Engineer.

Suffolk, Va.—Nansemond county will improve roads, expending between \$7000 and \$10,000 a year; Board of Supervisors adopted resolution accepting from State sum not exceeding \$5000 for this purpose; first work will be done simultaneously on four principal roads leading into Suffolk; W. Q. Peele, Supervisor.

Stamford, Texas.—City will vote March 26 on issuance of \$20,000 of bonds for street improvements. Address The Mayor.

Tampa, Fla.—City is considering bond issue for street paving. Address The Mayor.

Taylor, Texas.—Sol G. Yakey, Williamson County Commissioner, Georgetown, Texas, will begin about March 1 construction of first five miles of crushed stone roadway leading from Taylor toward Davilla, Texas; cost about \$2500 per mile. (Previously reported.)

Texarkana, Ark.—City is constructing 10 miles of concrete sidewalks. Address The Mayor.

SEWER CONSTRUCTION

Arkadelphia, Ark.—City will construct sewers; will soon offer for sale \$100,000 bond issue. Address The Mayor.

Baltimore, Md.—City awarded contract to T. Wallace Reilly, North and Eager Sts., Baltimore, at \$66,544.95, for construction of lateral sanitary sewers in connection with city's general sewerage system; laterals will cover territory bounded by Ashland avenue, Washington, Baltimore and Luzerne streets.

Birmingham, Ala.—City has repealed ordinance and rejected all bids for construction of sanitary sewer system for South Side, estimated to cost \$240,000; Maury Nicholson, City Engineer. (Recently mentioned.)

Brownsville, Texas.—City Council is considering plans for construction of sewer system; probably private sewerage company with \$25,000 capital stock will be organized. Address The Mayor.

Charleston, Miss.—City Council voted \$20,000 bond issue for sewerage and water-works. Address The Mayor.

Chattanooga, Tenn.—City is considering issuance of \$100,000 of bonds for cross-town sewer. W. R. Crabtree, Mayor.

Kansas City, Mo.—City will vote April 6 on issuance of \$4,500,000 of bonds, \$1,000,000 to be used for sewage disposal plant and \$300,000 for general sewer purposes; James L. Darnell, City Engineer, is preparing plans for disposal system.

Louisville, Ky.—Bids will be opened March 12 for construction of Cave Hill Lateral

Sewers, Contract No. 27, and on March 19 for construction of Section "A" of Middle Fork Trunk Sewer, Contract No. 28, of comprehensive system of sewerage; former will consist of 4500 feet of separate sewers, and latter of building concrete sewer about 3500 feet long; W. C. Nones, chairman Commissioners of Sewerage, Equitable Bldg; J. B. E. Breed, chief engineer. (See "Sewer Construction.")

Richmond, Va.—Finance Committee includes in budget for 1909, submitted to City Council, \$60,000 for sewers, including Hollywood sewer; this amount will probably be increased by bond issue; Charles E. Bolling, City Engineer. (Recently mentioned.)

Rock Hill, S. C.—Solomon-Norcross Company, Atlanta, Ga., has been employed to make survey to Catawba River for securing estimate on cost of municipal sewer system; John T. Roddy, Mayor. (Bond issue of \$250,000 recently reported voted for construction of sewer system and maintenance of water-works.)

Tampa, Fla.—City is considering bond issue for extension of sewer system. Address The Mayor.

Wagoner, Okla.—City awarded contract at \$22,000 to W. W. Cook & Son, Junction City, Kan., for construction of sewerage system at Wagoner; city lately noted as issuing \$40,000 bonds for sewers.

TELEPHONE SYSTEMS

Daytona, Fla.—East Florida Telephone Co. has applied for franchise to operate telephone system in Daytona.

Ellerson, Va.—Hanover Telephone Co. incorporated with \$5000 capital stock; E. J. Flippo, president, Ellerson; J. M. Long, vice-president, Atlee, Va.; J. B. Bradley, treasurer, Ellerson.

Goodwin's Ferry, Va.—Spruce Run Mutual Telephone Co. incorporated with \$5000 capital stock; L. A. Kessinger, president; J. D. Scott, secretary and treasurer.

Minceo, Okla.—Consolidated Telephone Co. incorporated with \$5000 capital stock by F. G. Dennis, Mustang, Okla.; R. L. Bristow and A. C. Bristow, both of Minceo.

New Orleans, La.—Cumberland Telephone & Telegraph Co., Leland Hume, general manager, executive offices, Nashville, Tenn., will soon begin construction of proposed Carrollton branch exchange building; electrical equipment will be installed.

Norman, Okla.—Norman Telephone Co. will expend about \$50,000 for improvements, including remodeling, installing metallic system and increasing switchboard facilities.

St. Joseph, Mo.—Citizens' Telephone Co., recently noted as having increased capital stock from \$1,000,000 to \$2,000,000, has changed name to Home Telephone Co.; will erect telephone exchange building; three stories; fireproof construction; cost about \$25,000; plans by Trunk & Helm, Hughes Bldg., St. Joseph; George B. Roberts, engineer in charge.

Wakefield, Va.—People's Telephone Co. incorporated with \$4000 capital stock; J. A. Suttle, president; A. W. Holt, vice-president; N. B. Bond, secretary and treasurer.

Weatherford, Okla.—Davis Bros. Telephone Co. incorporated by James P. Arthur D. and Myrtle Davis.

TEXTILE MILLS

Abilene, Texas.—Farmers' Union and Abilene business men propose forming company to build cotton mill lately mentioned; W. R. Holland and J. R. Keeling, Gulon, Texas, president and secretary of Farmers' Union, are active in movement.

Danville, Va.—Chambrays, etc.—Dan River Power & Manufacturing Co. has decided to build proposed additional mill reported last month; will construct three-story, 150x550-foot building and install 50,000 spindles, 1500 looms, etc.; electric power generated by water, with steam auxiliary; architects, Lockwood, Greene & Co., Boston, Mass.

Elora, Texas—Woolen Blankets, etc.—Thompson Land & Industrial Co., Huntsville, Ala., mentioned lately, is endeavoring to organize a company to build cotton and woolen mill at Elora; details not determined.

High Point, N. C.—W. P. and F. M. Pickett reported interested in plan to build cotton mill.

Inman, S. C.—Sheeting.—Inman Mill has erected addition 75x237 feet; will install spindles and looms, but number not decided; now has 19,424 spindles and 500 looms. (Mentioned in January.)

Marion, N. C.—Cotton Cloth.—D. D. Little, Spartanburg, S. C.; Carroll Baldwin, New York, and Marion parties will build mill to manufacture fine cotton cloth; will cost \$200,

000. Mr. Little will be president and manager.

Meridian, Miss.—Hosiery.—Alden Knitting Mill, New Orleans, La., reported as having plans for main building, boiler-house, etc., for proposed branch mill lately reported; main structure to cost \$10,000; all buildings and machinery to cost \$30,000.

Monroe, N. C.—Yarns.—Icenerlee Cotton Mills Co. has not arranged for erection of additional mill lately mentioned; contemplated 5000 spindles.

Westminster, S. C.—W. E. Cheswell contemplates organization of company to build cotton mill; organization depends on development of water-powers (recently purchased) for electrical transmission. (Lately mentioned.)

WATER-WORKS

Beaumont, Texas.—W. C. Teter has applied for franchise to construct water-works plant.

Berlin, Md.—City has received plans and specifications for water-works and electric-light plant recently reported; will open proposals March 16; engineers in charge, Dodge & Day, Washington Bldg., Philadelphia, Pa.; Mayor, Orlando Harrison. (See "Machinery Wanted.")

Braymer, Mo.—City reported as considering construction of water-works. Address The Mayor.

California, Mo.—City has voted \$30,000 of bonds for construction of water-works. Address The Mayor.

Charleston, Miss.—City Council voted \$20,000 bond issue for water-works and sewerage. Address The Mayor. (Recently mentioned.)

Chattanooga, Tenn.—City Water Co. will construct reinforced concrete reservoir.

Elgin, Texas.—City has appointed J. W. Maxcy Company, Binz Bldg., Houston, Texas, as engineer for constructing water-works lately reported; plans not completed; will probably call for internal combustion engines, direct connected to triple-pump pumps, with a 50,000 or 73,000-gallon standpipe; source of water supply, probably wells; piping will include 19,000 feet of 8-inch, 2300 feet of 6-inch and 5000 feet of 4-inch, with hydrants and valves; date of advertising for bids not determined. (See "Machinery Wanted.")

Fitzgerald, Ga.—Water, Light and Bond Commission awarded contract to E. E. Bailey of Fitzgerald for laying water mains; cost about \$5000. (Further facts recently mentioned.)

Follansbee, W. Va.—City Council granted franchise to Citizens' Water Co., promoted by Charles Crawford, to furnish water; plant will cost about \$50,000; water will be secured from artesian wells and be filtered.

Gadsden, Ala.—City is considering voting March 24 on issuance of \$75,000 of water-works bonds. Address The Mayor.

Granger, Texas.—Granger Oil Mill Co., recently noted to have purchased artesian well, will establish \$35,000 water-works system and ice plant.

Greeneville, Tenn.—City will vote March 20 on issuance of \$40,000 of bonds for purchasing or erecting electric-light and water-works plants. Address The Mayor. (Recently mentioned.)

Kansas City, Mo.—City will vote April 6 on issuance of \$4,500,000 of bonds for general improvements, \$1,500,000 to be used for water-works improvements, including additional pumps, settling basins and dikes for flood protection at Quindaro (Kans.) pumping station. James L. Darnell, City Engineer.

Knoxville, Tenn.—Special Water Committee and Finance Committee will meet with J. Pike Powers, Jr., City Attorney, and prepare amendment to acts of 1903 authorizing city to issue \$750,000 for purchasing or constructing water-works.

Stamford, Texas.—Progressive Business League has organized water-works company; will lay water main on Broadway and to south side of Southern Pacific Railway yards.

Mineo, Okla.—City has engaged Burns & McDonnell, Kansas City, Mo., as engineers for proposed water-works; cost about \$26,000; W. E. Shower, Town Clerk.

North Birmingham, Station Birmingham, Ala.—City is considering issuance of \$5,000,000 of bonds for construction of water-works. Address The Mayor.

Parkersburg, W. Va.—Water-Works Commission (W. B. Pedigo and others) submitted final report to City Council, recommending adoption of water-well system and election for voting on \$270,000 bonds for construction of water-works; this report based upon re-

port of engineers, Chapin and Knowles, which was presented with commissioners' report, and as part of it; resolution was also presented, which was passed by Council, authorizing commission to select engineer and secure estimate on cost of preparing complete working plans and specifications, according to general plans of commission.

Pleasanton, Texas.—City has contracted for system of water-works; water will be secured from present artesian wells. Address The Mayor.

Richmond, Va.—Finance Committee includes in budget for 1909, submitted to City Council, \$40,000 for extensions of water mains and fire protection; Charles E. Bolling, City Engineer.

Towson, Md.—Baltimore County Water & Electric Co. of Baltimore county is about to award contracts for reservoir to have capacity of 4,000,000 gallons; will be storage reservoir for use in connection with present system; plans prepared by company's engineers; Albert E. Walden, superintendent and chief engineer; executive offices, 411 East Baltimore St. (Recently mentioned.)

Vidalia, Ga.—City is considering issuance of \$9000 of bonds for improving water-works and electric-light plant. Address The Mayor.

WOODWORKING PLANTS

Bellington, W. Va.—Handles, etc.—Bellington Handle & Manufacturing Co. incorporated with \$10,000 capital stock; L. L. Bennett, president; E. A. Barte, secretary; W. S. Shurtliff, treasurer; will erect structure to cost about \$1000 and equip for manufacturing handles, etc. (Recently mentioned.)

Baltimore, Md.—Boxes.—William Suchting & Sons, 605-606 Portland St., awarded contract to Henry S. Ripple, 1-7 Clay St., Baltimore, for erection of box factory in rear of 6- and 610 Portland street, recently mentioned; three stories; concrete foundations; brick and heavy mill timber; steam heat; electric lights; 60x46 feet; cost about \$4000.

Birmingham, Ala.—Boxes and Baskets.—Birmingham Box & Basket Co. incorporated with \$20,000 capital stock by J. H. McCary, president; Fannie McCary and C. H. Abbott.

Canton, Ohio.—Fancy Work Tables.—L. Larson, 1509 South Market St., contemplates establishing in South a plant for manufacturing ladies' fancy work tables; has not selected location and is prepared to correspond relative to same.

Eure, N. C.—Barrels.—Bure Cooperage Co., B. B. Halstead, president, recently reported incorporated (under Norfolk, Va.) with \$50,000 capital stock, has plant already in operation; will enlarge and add drykiln in connection with stave plant.

Eureka Springs, Ark.—Furniture, etc.—T. J. Gordon will establish furniture factory; will also manufacture parts of wagons and carriages.

Hattiesburg, Miss.—Tables.—U. G. Fryant and L. A. Crocker propose establishment of table factory; \$5000 capital stock.

High Point, N. C.—Tables, etc.—E. L. and E. V. Crouch will, it is reported, establish plant for manufacturing tables and special woodwork.

Knoxville, Tenn.—Boxes and Shooks.—Holston Box & Lumber Co. will double capacity of plant; has about completed erection of factory building; will equip with improved machinery.

Leslie, Ark.—Hubs.—E. L. Linker will establish hub factory; initial capacity 400 hubs daily.

Logan, W. Va.—Furniture.—Guyan Furniture Co. incorporated with \$25,000 capital stock by C. McD. England, Henry Lawson, J. A. Washington and others.

Murfreesboro, Tenn.—Rim and Handle Works, A. C. Johnson, president, has plans prepared by F. R. Henry, Murfreesboro, for erection of proposed buildings; each building will be two stories; wooden; one 36x60 feet and one 24x80 feet; will install sawmill, hoop, rim, hickory-handle and insulator-pin machinery; all machinery purchased; contractor, R. Q. Patterson, Murfreesboro; company lately noted as contemplating establishing plant.

Pine Bluff, Ark.—Sash, Doors and Mill Work.—Sawyer & Austin Lumber Co. will erect addition to mill-work department.

St. Louis, Mo.—Furniture.—Lion Furniture Manufacturing Co. incorporated with \$30,000 capital stock by John M. Kiefer, G. W. Henry and Rolla M. Henry.

St. Louis, Mo.—Wood Stairs.—Mechanics' Stair Co. incorporated with \$6000 capital stock by Walter Jones, Walter Morgan and Fred Wetlig.

BURNED

Anderson, S. C.—Petroleum Oil Co.'s warehouse and stables; loss about \$3000.

Baltimore, Md.—Giles W. Quarles Company's store building at 106 West Baltimore street; loss about \$25,000.

Baltimore, Md.—Jacob C. Shafer's sausage smokehouse; loss about \$5000.

Berkeley Springs, W. Va.—West Virginia & Pennsylvania Sand Co.'s sand works.

Chickasha, Okla.—Signon Furniture Co.'s warehouse; loss \$8000.

Chickasha, Okla.—Signon Furniture Manufacturing Co.'s warehouse; loss \$10,000.

Clifton, S. C.—Clifton Manufacturing Co.'s mill village hotel; loss about \$8000; Mrs. I. F. Kirby, manager.

Cottonwood, Ala.—M. L. Blackman's saw-mill and cotton gin; loss about \$5000.

Fitzpatrick, Ala.—C. G. Canty's store building; Huffman & Co.'s store building; total loss about \$4000.

Greensboro, N. C.—Greensboro Hardwood Manufacturing Co.'s plant; loss about \$40,000.

Greenwood, Miss.—Jos. Lipovac's residence; loss about \$6000.

Hunter, Texas.—Hunter Gin Co.'s cotton gin; loss \$6000.

Jacksonville, Fla.—Building occupied by Florida Electric Co., J. H. Trembley, McGraw Bros. and Jacksonville Gas Co.; loss about \$30,000; building owned by Mrs. Fannie Taylor.

Kershaw, S. C.—Kershaw Oil Mill Co.'s linter and separator rooms; loss about \$25,000.

Kyle, Texas.—Kyle Oil & Gin Co.'s cotton gin and oil mill; loss \$100,000.

Lauderdale, Miss.—Lauderdale Gin & Mill Co.'s cotton gin and grist mill; loss about \$6000; branch of Eagle Cotton Oil Co., Meridian, Miss.

Laurel, Miss.—Hotel Hutto; loss \$10,000; building owned by Mrs. J. C. Clark.

Lawrenceburg, Ky.—Galt House; loss \$7500.

Mansfield, La.—Texas & Pacific Railway's depot, B. S. Wathen, chief engineer, Dallas, Texas; loss \$15,000.

Mansfield, La.—Texas & Pacific Railway Co.'s passenger and freight depot; loss about \$15,000; B. S. Wathen, chief engineer, Dallas, Texas.

Maryville, Tenn.—John J. Lambert's residence; loss about \$4000.

McLean, Texas.—Star Mill & Elevator Co.'s elevator; loss about \$15,000.

Messena, Ga.—S. M. Hall's cotton gin; loss \$5000.

Mobile, Ala.—John R. Posey's residence; loss about \$3500.

Nashville, Tenn.—Waldorf stables; loss about \$15,000.

New Orleans, La.—Mrs. Alice O'Neal's residence; loss about \$7000.

New Orleans, La.—King Bros. & Saint's factory and warehouse damaged; building owned by St. Vincent's Orphan Asylum; loss about \$10,000.

Norton, Va.—C. E. Robbinett's store building; M. A. Cress' grocery store; W. A. Cress' store building; Price & Co.'s building; L. Hogg & Co.'s building; Gideon Hogg & Co.'s building; Peter Niard's grocery store; total loss about \$50,000.

Poplarville, Miss.—J. S. Moody's store building; loss about \$10,000.

Ruston, La.—Presbyterian Church. Address The Pastor.

San Marcos, Texas.—C. N. Houston's store building; loss \$16,000.

Scranton, Texas.—Morrison & Morrison's grain and feed store, loss \$4500; W. R. Clark's store building; A. Richardson's blacksmith shop, loss \$3500; Hamilton, O'Brien & Epley's hardware and furniture store, loss \$15,000; M. E. Campbell's building, loss \$6500.

Savannah, Ga.—Vale Royal Manufacturing Co.'s lumber mills; loss about \$75,000.

Snow Hill, Md.—Smith, Moore & Co.'s lumber mill, loss about \$30,000; Makemle Memorial Presbyterian Church damaged, loss about \$3000.

Spartanburg, S. C.—W. F. West's cotton gin; loss about \$2200.

Spencer, N. C.—Klutz & Linn's cotton gin; loss about \$25,000.

St. George, S. C.—St. George Cottonseed Oil Co.'s plant; loss about \$45,000.

Suffolk, Va.—Suffolk Light & Ice Co.'s power plant, owned by Norfolk & Portsmouth Traction Co.; loss about \$10,000.

Texarkana, Ark.—Arkansas Cotton Oil Co.'s plant; loss about \$250,000.

Thomaston, Ga.—R. E. Lee School building; loss \$20,000.

Timber, Texas.—Sawmill and machine shop at Timber, owned by Miller-Vidor Lumber Co., Galveston, Texas; loss about \$47,000.

Trinity, Texas.—Holland Hotel, loss \$10,000; First State Bank, loss on building, owned by R. T. Walker, \$1500; Charles Elliott's store building, loss \$4000; B. Richards' store building, loss about \$9000; Smith Hotel, building owned by J. B. Gibson, loss \$5000; Baptist church, loss \$2000.

White, Ark.—Guilge Bros.' sawmill and planer; loss about \$25,000.

BUILDING NOTES**APARTMENT-HOUSES**

Atlanta, Ga.—Lichtenstein & Mendel, 75 Decatur street, have had plans prepared by A. Ten Eyck Brown, 71 Forsyth St., Atlanta, for erection of two apartment-houses; three stories; six apartments; brick; each building 40x120 feet; steam heating; electric lights; two dumb waiters; cost \$25,000; contract will be awarded March 5.

Atlanta, Ga.—Albert Howell, Jr., will erect apartment-house; 10 stories; three apartments on each floor, averaging six rooms to the apartment; site, 200x130 feet; cost about \$200,000.

Dallas, Texas.—D. W. Shanks is having plans prepared by H. A. Overbeck of Dallas for two apartment-houses; electric elevators; tile roofing; plastered interiors; each to have independent steam-heating plant; brick veneer facing.

Houston, Texas.—S. E. McAshan has purchased site for \$20,000 and will erect ten-story apartment-house.

Kansas City, Mo.—Anton Weber will erect three six-apartment buildings; each apartment will contain six rooms; each structure will be three stories; vitrified brick and cut stone; front verandas will have wrought-iron railings; interior finish oak, with hardwood floors; marble stairways; cost \$50,000; plans by J. G. Braecklein, Kansas City.

Louisville, Ky.—Frank W. Quast is having plans prepared by Herman Wischmeyer of Louisville for erection of apartment-house; three stories; six apartments; steam heat; cost about \$20,000.

Nashville, Tenn.—J. W. Blair will erect brick apartment-house to cost \$26,294.

Norfolk, Va.—R. L. Holland will erect apartment-house; three stories; brick; 74x36 feet; cost \$7500; contract awarded Myers-Turpin Construction Co. of Norfolk.

Spartanburg, S. C.—Charles P. Ligon is considering erection of apartment-house.

St. Louis, Mo.—Arthur Hess, builder, 348 Wyoming St., is receiving bids for apartment-house for Henry Person; structure to be two stories; 29 feet 6 inches by 57 feet; buff brick, Carthage stone, marble, granite, walks and cellars, terra-cotta, iron, steel girders and posts, wire guards, composition roof, hard-plaster ceilings, galvanized-iron cornice and bay windows, tin deck porch, gas and electric fixtures, cabinet mantels, hot-water and hot-air furnaces; cost about \$8000.

BANK AND OFFICE BUILDINGS

Atlanta, Ga.—John W. Grant is having plans prepared by Morgan & Dillon, Prudential Bldg.; A. Ten Eyck Brown, 71 North Forsyth St., and W. T. Downing, Prudential Bldg., all of Atlanta, for bank and office building; 16 stories; 68x106 feet; stone, brick and steel; fireproof; marble stairways with bronze rails; five electric elevators; floors of marble tile; lobby to be marble and walls finished in marble; practically entire lower floor to be occupied by Third National Bank; interior of bank to be marble throughout, with marble columns, marble wainscoting, counters and vault fronts; grilles to be of bronze, and galleries to extend over entire interior of bank proper; cost about \$500,000. (Referred to in November.)

Augusta, Ga.—Augusta Savings Bank will erect bank and office building; stone steps; front of marble; marble archway over door; front part of structure, extending back 80 feet, one story; rear portion, two stories; estimated cost, \$50,000.

Baltimore, Md.—Clifton Savings Bank, 1069 North Gay St., has had plans prepared by J. Edward Lafferty, 11 Pleasant St., Baltimore, for bank and office building at Broadway, Chase and Gay streets; frontage of 39 feet on Gay street and of 30 feet on each of other two streets; two stories; facade of selected press brick, with cut-stone trimmings and ornamental arched entrance; bank to occupy first floor, and upper floor for offices; banking portion to be fireproof, concrete

floors and ceiling, and contain fire and burglar proof vault; estimates are being received from C. C. Watts, 113 West Hamilton St.; Frederick Decker & Son, 129-131 East Biddle St.; Lorenz A. Schoenlein, 2217 East Baltimore St., and William H. Porter & Son, 505-507 Forrest St. east.

Blum, Texas.—Farmers' State Bank, W. T. Herrick, president, has awarded contract to E. T. Zimmerman, Blum, for construction of proposed bank building; 40x80 feet; estimated cost, \$5000. (Lately noted.)

Columbia, S. C.—Carolina National Bank will erect store and office building; metal ceiling for both stories; tin roof; electric wiring; steam heat; fire hydrants throughout; patent plaster; plumbing; automatic fusible-link fire shutters to all doors and windows; plate-glass fronts; stone front; contract cost approximately \$7000; plans by Hamby & Hamby, National Loan & Exchange Bank Bldg., Columbia.

Conway, Ark.—Dr. George S. Brown and Dr. J. S. Westerfield will erect office building; contract awarded.

Fort Worth, Texas.—Chicago, Burlington & Quincy Railroad will not erect office building; recently incorrectly reported.

Gadsden, Ala.—Alabama Bank & Trust Co., Dr. C. L. Guice, president, will remodel building for banking purposes; plans being prepared by A. D. Simpson of Gadsden.

Grosvania, Ga.—L. A. Shepherd will, it is reported, erect concrete bank building.

Hamlet, N. C.—North & South Carolina Railway Co., J. E. Hancock, superintendent, will erect office building.

Hopkinsville, Ky.—Dr. J. W. Harned has had plans prepared by James Lee Long, Box 293, Hopkinsville, for erection of proposed bank and office building; three stories; brick, stone and concrete; fireproof; hot water; gas and electric lighting; electric elevators; cost \$25,000; will install boilers, piping, etc.; bids will be received and let by architect about May 1.

Little Rock, Ark.—State National Bank has changed plans and will increase frontage plan of bank and office building (to be erected) from 50 to 60 feet, adding \$35,000 to cost; structure is to be 11 stories, with basement and sub-basement; depth 140 feet; steel frame; fireproof; exterior of white enamel brick; three electric elevators; electric lighting; two electric lifts to connect roof garden with basement; cost estimated at \$35,000; construction will soon begin; plans by George R. Mann of Little Rock; contract awarded Gray Construction Co., St. Louis, Mo. (Further facts mentioned in December.)

Pine Bluff, Ark.—J. F. Rutherford is reported interested in erection of 10-story office building; George R. Mann, architect, Little Rock, Ark., was consulted.

Spartanburg, S. C.—O. L. Johnson contemplates erection of office building; five stories; pressed brick.

St. Louis, Mo.—E. W. Hilker, Madison, Mo., reported as having plans prepared for store and office building to cost \$50,000.

St. Louis, Mo.—Oliver P. Langan, president Langan & Taylor Storage & Moving Co., will erect reinforced-concrete office building; storage and root garden; 155x135 feet; eight stories, full basement; 11 stories on first floor and 15 offices on second floor; basement will contain bowling alleys and restaurant; part of building will have fireproof vaults and cold-storage vaults; exterior of polished granite; base faced with light-buff Bedford stone to third story; entrances carved white Carthage stone; upper portion will be faced with dark-red mottled vitrified brick; corridors, rotunda, etc., will have marble floors and marble wainscoting; offices furnished in mahogany; doors inlaid with ebony; two passenger elevators; marble stairway from basement to roof; one freight elevator 9x11 feet; one elevator 11.6x21 feet long to carry a van of furniture; plans by E. Ross Chamblin, Holland Bldg., St. Louis; estimated cost of building \$250,000; bids will be invited March 15.

Sumner, Miss.—People's Bank will rebuild bank building recently reported burned.

Tulsa, Okla.—Dr. C. L. Reeder is having plans prepared by Architect Curtin, Tulsa, for five-story addition to Reeder Building; to be of concrete and connected with present building on each floor.

Washington, D. C.—Robt. N. Harper, 1415 G St. N. W., will erect eight-story office building; fireproof; steam heat; electric elevators; estimated cost \$85,000. (Recently noted.)

CHURCHES

Aberdeen, Miss.—Gaston Therrell, secretary building committee, invites plans and specifications for church; pressed brick; seating

capacity, 800 to 900; cost not less than \$27,500; site 98x125 feet; plans in by March 15.

Asheville, N. C.—Balm Grove Methodist Church of West Asheville will erect edifice; brick veneer; cost about \$5000.

Chattanooga, Tenn.—St. James' M. E. Church, Rev. W. F. Pitts, pastor, Rossville and Read Ave., awarded contract to J. C. Murphy, 12 Read Ave., Chattanooga, for completion of church edifice; addition for auditorium will be 50x54 feet; brick with stone trimmings; slate roof; concrete footings and walls; hard pine interior finish; hot-air or steam heating plant; gas and electric lighting; cost about \$10,000; plans by Daniel A. Camer, First National Bank Bldg., Chattanooga; contract for brick work awarded to R. L. Westcott, James Bldg., Chattanooga. (Lately mentioned.)

Conway, Ark.—First Baptist Church will expend about \$30,000 in erection of edifice; 80x120 feet; steam heat; electric lighting; plans by Charles L. Thompson, Little Rock, Ark. (Recently mentioned.)

Dublin, Ga.—Catholic Congregation will erect edifice to cost about \$5000. Address The Pastor, Catholic Church.

Enid, Okla.—Episcopal Church will erect brick or stone edifice, to cost about \$10,000. Address The Pastor, Episcopal Congregation.

Gardenville, Station Baltimore, Md.—St. Anthony's Catholic Church, Rev. A. Gamp, pastor, will remodel and erect addition to church building and enlarge Sunday-school; Robert C. Ulrich, 1516 Highland Ave., Baltimore, will prepare plans and specifications.

Hartselle, Ala.—First Methodist Church, Rev. E. B. Norton, pastor, will erect edifice; brick and stone; cost between \$10,000 and \$20,000.

Town Park, Texas.—M. E. Church South will erect edifice; concrete blocks; cost about \$6000; Rev. C. P. Martin is pastor.

Lumberton, N. C.—Methodist Church, recently mentioned as having plans prepared by H. E. Bonitz, Wilmington, N. C., for construction of church, will award contract March 20; ordinary construction; brick, stone and terra-cotta; electric lights; warm air; cost, \$18,000.

Manchester, Va.—Bainbridge Street Baptist Church, Rev. J. S. Peters, pastor, is having plans prepared by W. C. West, Manchester, for annex to church; cost \$5000.

McGregor, Texas.—Baptist Church will erect edifice; brick and stone. Address The Pastor, Baptist Congregation.

Memphis, Tenn.—Union Avenue Baptist Church, Rev. D. W. Boddell, pastor, will erect addition to church building; 25x45 feet; stone; cost about \$5000.

Memphis, Tenn.—Madison Heights M. E. Church South, J. T. Myers, pastor, has had plans prepared by Walker C. Jones, Memphis, for addition to church and Sunday-school room; addition to church, 20x50 feet; addition to Sunday-school, 50x70 feet; stone; furnaces; electric lights; estimated cost, \$35,000. (Lately noted.)

Memphis, Tenn.—Idlewild Presbyterian Church has awarded contract to R. F. Creason, Memphis, for construction of edifice; concrete foundation; tile roof; cost \$17,068.

Memphis, Tenn.—Pilgrim Baptist Church has awarded contract to F. W. Burrows, Memphis, for erection of edifice; brick and stone veneered; cost \$4300.

Meridian, Miss.—Fifteenth Avenue Baptist Church will erect edifice to cost about \$4000. Address The Pastor, Fifteenth Avenue Baptist Congregation.

Meridian, Miss.—Fifteenth Avenue Baptist Church will erect brick edifice to cost about \$14,000. Address The Pastor, Fifteenth Avenue Baptist Congregation.

Milledgeville, Ga.—Methodist Church, Rev. Ford McRee, pastor, will erect edifice to cost about \$25,000.

Mineral Wells, Texas.—First Baptist Church, W. E. Brittman, pastor, will erect edifice; brick and stone; hot-air heating; electric lights; cost \$25,000; contract will be awarded July 1. (Lately mentioned.) See "Machinery Wanted."

Nacogdoches, Texas.—Methodist Church will erect edifice; brick; electric lighting; steam heat; Sunday-school in basement; cost about \$30,000. Address The Pastor, Methodist Congregation.

Nashville, Tenn.—South Side Baptist Church will erect edifice to cost about \$20,000; only Sunday-school room, to cost \$7,000, will be built at present; construction has begun; Rev. J. W. Stewart is pastor.

Portsmouth, Va.—Calvary Baptist Church, Rev. F. H. Farrington, pastor, contemplating erection of edifice.

Raleigh, N. C.—Edenton Street Methodist

Church, Rev. F. M. Shambarger, pastor, will erect Sunday-school building.

Richmond, Va.—First English Lutheran Church will erect edifice. Address The Pastor, First English Lutheran Congregation.

Strawn, Texas.—Baptist congregation will erect edifice; brick and stone; cost \$7000.

Tallahassee, Fla.—Trinity M. E. Church has appointed G. W. Saxon and J. W. Collins building committee to secure plans for remodeling and erecting addition to church building; cost of improvements, \$12,000.

Waco, Texas.—First Presbyterian Church, Rev. C. T. Caldwell, pastor, is having plans and specifications prepared for edifice.

COURTHOUSES

Monticello, Miss.—Lawrence County Supervisors considering erection of courthouse to cost about \$75,000.

Suffolk, Va.—Nansemond County will expend about \$1500 in remodeling courthouse; will not erect annex at present, as lately stated; plans by John K. Peebles, Norfolk, Va.

Tulsa, Okla.—Tulsa County Commissioners are having plans prepared for erection of \$60,000 courthouse. (Lately noted as voting issuance of bonds.)

DWELLINGS

Anderson, S. C.—C. W. McGee has purchased site 70x290 feet and will erect residence.

Asheville, N. C.—C. W. Brown has had plans prepared by W. H. Lord, Asheville, for residence; eight rooms; brick and shingle; hot-water heat; electric lights; cost about \$5000.

Baltimore, Md.—Jos. T. Flautt, Sr., 4000 Park Heights Ave., Baltimore, will erect 12 dwellings on Reisterstown road; two stories; 16x60 feet; mill construction; steam heat; gas and electric lights; cost \$2500; each; owner is builder; Jacob F. Gerwig, 210 East Lexington St., lately mentioned as preparing plans.

Baltimore, Md.—Vigilant Realty Co., through F. M. Miller, 2137 North Fulton Ave., has purchased 15 lots on Walnut avenue, Rognel Heights (suburb), and will improve with dwellings; combination lighting; steam heat; laundries, etc.

Baltimore, Md.—George M. Singer is having plans prepared by Jacob F. Gerwig, 210 East Lexington St., Baltimore, for five dwellings on Kate avenue; brick; 14x2 feet; hot-air heat; gas and electric fixtures; cost \$6000. (Lately noted.)

Baltimore, Md.—Jos. T. Flautt, 4000 Park Heights Ave., is having plans prepared by Jacob F. Gerwig, 210 East Lexington St., Baltimore, for 12 dwellings on Reisterstown road; two or three stories; each lot 16x150 feet.

Baltimore, Md.—M. C. Hughes, 745 West Hamburg St., will erect two-story brick dwelling at 815 Mangold street; 14x28 feet.

Baltimore, Md.—Thomas Biddison has had plans prepared by Henry J. Tinley, Hoffman Bldg., Baltimore, for 12 dwellings on Boyd and Pulaski streets; two stories; foundations heavy stone laid in cement.

Baltimore, Md.—Thomas E. Biddison, 1820 West Baltimore St., has awarded contract to James Ames, Baltimore, for erection of 12 dwellings on Boyd and Pulaski streets; two stories; hot-air furnaces; gas; cost \$12,000; Henry J. Tinley, 314 North Charles St., prepared plans. (Lately noted.)

Birmingham, Ala.—Mrs. S. Markell has had plans prepared by D. O. Whildin, Birmingham, for residence; two stories; frame; ordinary construction; furnace heat; electric lights; cost \$3500.

Birmingham, Ala.—Fairview Realty Co. awarded contract to G. W. Pabst, Birmingham, for erection of residence; ordinary construction; grates; electric lighting; cost \$5000.

Birmingham, Ala.—J. L. Ferguson awarded contract to F. M. Fossett, Birmingham, for erection of residence; two stories; frame; ordinary construction; grates; electricity; cost \$3000.

Birmingham, Ala.—Mr. Sawyer awarded contract to S. Dombey, Birmingham, for erection of residence noted in January; two stories; frame; ordinary construction; furnace heat; electric lights; cost \$3000; plans by D. O. Whildin, Birmingham.

Bodie Island (not a postoffice), N. C.—Bids will be opened March 25 for material and labor of all kinds necessary for erection and delivery of keeper's dwelling at Bodie Island Light Station, N. C.; plans and specifications on file at office of Lighthouse Engineer, Baltimore, Md.

Bridgeport, Ala.—L. L. Lawrence, Cham-

berlain Bldg., Chattanooga, Tenn., will erect residence at Bridgeport; two stories and basement; frame; metal-shingle roof; about 10 rooms; hard pine and oak interior finish; cabinet mantels; modern plumbing; hot-air heating plant; gasoline-gas lighting plant; cost between \$4000 and \$5000; work will be done by day labor.

Chattanooga, Tenn.—D. A. Graves, 818 East 10th St., Chattanooga, awarded contract to Cox & Rider, 121 Burch St., Chattanooga, for erection of \$3500 two-story-and-basement brick residence; 10 rooms; slate roof; hard pine interior finish; hot-water heat; gas and electric lighting; plans by Adams & Alsop, architects, James Bldg., Chattanooga.

Chattanooga, Tenn.—J. M. Howard, 703 McCallie Ave., has had plans prepared by Huntington & Sears, News Bldg., Chattanooga, for dwelling; two stories; brick; slate; gravel or tin roof; electric lights; modern plumbing; cost \$3500.

Chattanooga, Tenn.—W. W. Canfield, 120 Eleanor St., Hill City, will erect dwelling; two stories and basement; brick; seven or eight rooms; slate or galvanized-iron shingled roof; tile floor to porch; oak and hard pine interior finish; cabinet mantels; modern plumbing; hot-air or hot-water heat; electric and gas lighting; owner is architect and builder.

Delhi, La.—Planters' Industrial Institute, James Chambers Wilson, president, will erect 50 to 100 cottages.

Florence, Ala.—H. B. Austin will erect dwelling; nine rooms; frame; hot water; gas and electric; cost \$3500; owner is builder. (Lately mentioned. See "Machinery Wanted.")

Front Royal, Va.—F. L. Evans, 1828 Calvert St., Washington, D. C., awarded contract to John Rittman, Front Royal, for erection of residence in Front Royal; colonial style; 50x31 feet; frame and stucco; steam heat; electric and acetylene lighting; cost \$10,000; plans by Hunter & Bell, 518 10th St. N. W., Washington, D. C. (Recently mentioned.)

Greenwood, Miss.—Jos. Lipovac will rebuild residence, reported burned; loss about \$6000.

Gretna, La.—Mr. Hunter has had plans prepared by H. F. Hinrichs, New Orleans, La., for residence.

Hopkinsville, Ky.—Westminster Church has had plans prepared by James Lee Long, Hopkinsville, P. O. Box 293, for erection of proposed parsonage; brick veneered; hot-water heating; gas and electricity; cost \$5000; Forbes Manufacturing Co., Hopkinsville, contractor.

Hopkinsville, Ky.—Dr. E. C. Anderson has had plans prepared by James Lee Long, P. O. Box 293, Hopkinsville, for erection of dwelling; colonial verandas and porch; concrete walks; hot-water heating plant; cost \$20,000; contract will be awarded May 1 (See "Machinery Wanted.")

Houston, Texas.—Mrs. F. Rich has had plans prepared by Charles R. Dunbar, Houston, for dwelling; 10 rooms; cost \$11,000.

Kansas City, Mo.—J. A. Guthrie has purchased site, 125x200 feet, and will erect residence.

Knoxville, Tenn.—C. F. Maples has had plans prepared by Baumann Bros., Knoxville, for residence; two stories; eight rooms; colonial style; slate roof; large porches; finished throughout in hardwood.

Knoxville, Tenn.—J. M. Burkhardt has had plans prepared by C. E. Lynn, Knoxville, for \$3000 residence.

Knoxville, Tenn.—Mrs. A. A. Russell will erect \$4500 frame dwelling.

Lake Toxaway, N. C.—C. T. Lipscomb awarded contract to J. M. Kilpatrick, Brevard, N. C., for erection of residence at Lake Toxaway; shingled and stained inside and out; electric lights; deep well; motor pump; plumbing, etc.; cost about \$3500; plans by Hamby & Hamby, 412 National Loan and Exchange Bank, Columbia, S. C.

Lakeview, N. C.—Misses Cora and Alice McQueen, Charleston, S. C., will erect residence at Lakeview.

Memphis, Tenn.—W. P. Chapman, 63 Madison Ave., has had plans prepared by Boone & Johnston, Goodwyn Institute, Memphis, for erection of proposed dwelling; 44x33 feet; two stories; frame; electric and gas fixtures; estimated cost, \$5000, exclusive of heating, wiring and plumbing; W. P. Chapman, Memphis, contractor. (Lately noted.)

Memphis, Tenn.—J. Williams will erect residence; two stories; veneered brick and stone; eight rooms; cost \$4600.

Mission, Texas.—William Jennings Bryan of Lincoln, Neb., will erect home at Mission.

Nashville, Tenn.—Mrs. William Cantrell will erect residence.

New Orleans, La.—Charles Kitchen has had plans prepared by Rolf A. George, New Orleans, for double cottage.

New Orleans, La.—Mrs. S. Mayewski awarded contract to J. Gazin, New Orleans, for erection of double two-story residence.

New Orleans, La.—L. Williams has had plans prepared by DeLisle & Orr, New Orleans, for two residences; double; two stories and basement; concrete foundation; subestimates being received.

New Orleans, La.—Elias Pallet will erect three double cottages.

Norfolk, Va.—S. S. Dear awarded contract to Lenoir & East, Norfolk, for erection of double brick dwelling, to cost \$12,000.

Oklahoma City, Okla.—E. A. Lutes will build dwelling.

Pine Bluff, Ark.—J. F. Rutherford awarded contract to George R. Mann, Little Rock, Ark., for erection of residence; cost about \$25,000.

Purvis, Miss.—Rev. M. L. Burton has had plans prepared by DeLisle & Orr, New Orleans, La., for single cottage.

Ralmund (not a postoffice), Ala.—Republic Iron & Steel Co., main office Frick Bldg., Annex, Pittsburgh, Pa., awarded contract to J. B. Anderson, Powderly, Ky., for erection of 50 dwellings at Ralmund; four or five rooms; cost about \$1500.

Sapulpa, Okla.—T. R. Whittaker will erect residence.

South Norfolk, Va.—Mrs. John Cuthrell awarded contract to J. V. Johnson & Bros., South Norfolk, for completion of residence; artificial stone; hardwood floors; reinforced concrete porch floors and columns; cost about \$10,000.

St. Louis, Mo.—Nathan Friedman has purchased site, 60x195 feet, and will erect residence.

St. Petersburg, Fla.—J. Darrow will erect residence.

Sumter, S. C.—Catholic Church awarded contract to J. W. McFie, Sumter, for erection of rectory.

Tampa, Fla.—P. Rey will erect \$10,000 residence.

Washington, D. C.—George C. Pumphrey, 414 7th St. S. W., will erect nine three-story dwellings in Woodley Park.

Washington, D. C.—Mrs. Maggie V. Roche awarded contract to G. W. Barkman, 721 A St. S. E., Washington, for dwelling in Woodley Park; three stories; brick; site 20x120 feet; cost \$5000; plans by A. H. Beers, 1333 G St. N. W., Washington.

Washington, D. C.—W. C. Blundon, 30 Quincy Pl. N. W., has had plans prepared by Hunter & Bell, 518 10th St. N. W., Washington, for three two-story brick dwellings at 2010 to 2014 North Capitol street; owner builder.

Washington, D. C.—James Martin has had plans prepared by Matthew G. Lepley, 467 H St. N. W., Washington, for six dwellings at 3210 to 3220 13th street northwest; three stories; brick; cost about \$30,000; owner builder.

Washington, D. C.—Hebard Cypress Co. has had plans prepared by and awarded contract to V. C. Parker, Waycross, for erection of residence for J. M. Hopkins, recently mentioned; two stories; frame; 10 rooms; two baths; mill construction; hot-air heat; electric lights; cost \$4000. (See "Machinery Wanted.")

GOVERNMENT AND STATE BUILDINGS

INGS

Burwood, La.—Buildings.—Engineer Office, U. S. Army, Room N, Custom-house, New Orleans, La.—Sealed proposals for furnishing plant, labor and materials and constructing buildings at Burrwood, Southwest Pass, Mississippi River, will be received until March 24; information on application; Lansing H. Beach, Lieutenant-Colonel, Engineers.

Dothan, Ala.—Postoffice.—Treasury Department, office of supervising architect, James Knox Taylor, Washington, D. C.—Sealed proposals will be opened April 5 for construction (including plumbing, gaspiping, heating apparatus, electric conduits and wiring) of United States postoffice at Dothan in accordance with drawings and specifications, copies of which may be obtained from custodian of site at Dothan or at his office at discretion of supervising architect.

Fort Oglethorpe, Ga.—Buildings.—U. S. Constructing Quartermaster at Fort Oglethorpe will receive bids, probably during next 30 days, for: Quarters for field officers; two stories and basement and attic; brick; size 38x48 feet; tile or slate roof; cement floor in basement; concrete footings; white pine or hard cypress interior finish; cabinet mantels; tile in bathroom; modern plumb-

ing; steam-heating plant; acetylene-gas lighting. Double quarters for two lieutenants; two stories, basement and attic; brick; size 49x61½ feet; tile or slate roof; brick interior finish; cabinet mantels; tile in bathroom; cement floor in basement; concrete footings; steam-heating plant; acetylene-gas lighting. Apply to Construction Quartermaster for specifications.

Gainesville, Fla.—Postoffice.—King Lumber Co., Charlottesville, Va., has contract at \$128,400 to erect United States postoffice and courthouse at Gainesville. (Mentioned in December.)

Lake Charles, La.—King Lumber Co., Lake Charles, La., has contract at \$108,900 to erect United States postoffice and courthouse at Lake Charles. (Recently mentioned.)

Lynchburg, Va.—Hospital.—State General Hospital Board decided to establish proposed State epileptic colony on Morris estate in Amherst county; site comprises about 1000 acres and cost \$35,000; Board of Western Hospital (composed of James L. Tredway, Chatham, Va., and others) will have charge of work under direction of general board; understood board will ask for plans and specifications at once and that construction will begin soon; electric lights and water will be obtained from city; J. M. Baumeran, Woodstock, Va., is State Hospital Commissioner.

National Soldiers' Home, Va.—Storehouse, etc.—R. H. Richardson & Son, Hampton, Va., have contract to erect commissary storehouse, toolhouse and power-house, and John W. Danforth Company, New York, has contract for electrical apparatus; contract price about \$300,000; steam-heating plant will be installed; electric lights; six batteries of boilers, three 250-horse-power engines, coal conveyors, etc., will also be installed; estimated cost of completed building, \$300,000. (Recently noted.)

San Antonio, Texas—Postoffice.—Thomas Lovell & Son, Denton, Texas, have contract at \$133,217 for erection of United States postoffice at San Antonio. (Recently mentioned.)

Washington, D. C.—Legislative Hall.—House of Representatives voted to adopt resolution appropriating \$350,000 to change arrangement of hall of the House; proposed plan is to reduce area from 380,000 cubic feet to 260,000 cubic feet, provide for seating capacity of 450 and give direct communication with outer air by way of windows in south hall of Capitol Building; Elliott Woods, Superintendent of Capitol Building and Grounds.

Washington, D. C.—Officers' Quarters, etc.—Office of Constructing Quartermaster, Washington, Takoma Substation, D. C.—Sealed proposals will be received until March 31 for construction, including Plumbing, heating, electric wiring and electric-lighting fixtures of two single sets officers' quarters, hospital corps barrack, storehouse, stable and wagon shed and garage at Walter Reed Army General Hospital, Washington, D. C.; plans, specifications, blank proposals and further information furnished on application; a deposit of \$50 required for plans and specifications; H. L. Pettus, Constructing Quartermaster.

HOTELS

Atlanta, Ga.—A. Ten Eyck Brown, Atlanta, is preparing plans for annex to Piedmont Hotel; 10-story; addition will add 101 rooms; present cafe will be enlarged 15 feet; assembly hall on top floor; additional rooms for employees will also be added; hot and cold water in each room; cost \$200,000; C. A. Wood of Harvey & Wood is lessee of hotel. (Lately noted.)

Birmingham, Ala.—Fifth Avenue Hotel Co. organized with W. H. Woodward president and F. W. Fowlkes secretary-treasurer to erect hotel at 20th street and Fifth avenue; has purchased site 140x160 feet for \$160,000; hotel will probably be 12 stories, of fireproof steel-frame construction, and cost about \$640,000. (This is Hotel Mortimer recently mentioned to be erected by Brown Bros. & Co.)

Chattanooga, Tenn.—Willoughby Adams, Albion View, Tenn., has not decided upon rebuilding of Cliffs Hotel on Walden's Ridge, recently reported burned; no plans have been made.

Dallas, Texas.—Hughes O'Rourke Construction Co. of Dallas has contract to erect annex to St. George Hotel; eight stories; fireproof; steel; cost about \$90,000. H. P. Mozier of Dallas has prepared plans; Charles O. Hodges, lessee. (Recently mentioned.)

Galveston, Texas.—D. N. McKenzie, Galveston, has prepared plans for erection of hotel 79x48 feet on Galveston beach; four stories; verandas for upper three stories; 32 bedrooms; cost \$15,000; Bowden & Worth, Galveston, contractor.

Gurley, Ala.—T. F. Clark has awarded contract to E. H. Trebes, Huntsville, Ala., for erection of concrete hotel at Gurley.

Hearne, Texas.—Sam E. Kenner has awarded contract for erection of two-story hotel.

Lexington, Ky.—James B. Haggan of New York reported to erect hotel, about 100x150 feet; Charles H. Berryman, local representative.

Lexington, Ky.—Phoenix Hotel Co. is having plans prepared by C. E. Richards, Columbus, Ohio, for addition to present hotel; estimated cost of improvements \$300,000. (Lately mentioned.)

Odenville, Ala.—W. T. Brown, Ragland, Ala., recently reported interested in erection of hotel at Odenville, has had plans prepared by J. M. Heard, Odenville, Ala., for erection of structure; 50x100 feet; two stories; plate-glass front; gravel roof; hard wall plaster; ordinary construction; grates tiles and mantels; gasoline lighting equipment; no elevators; cost \$7315; J. M. Heard, Odenville, contractor.

Plancheville, La.—M. E. St. Romain will erect hotel; cost \$3000.

Quanah, Texas.—J. L. White will erect hotel; 100x30 feet; two stories; 32 rooms.

Starkville, Miss.—H. A. Beattie is interested in erection of hotel; brick; three stories; stores on first floor; cost \$25,000.

St. Petersburg, Fla.—A. W. Fisher of Foley & Fisher is having plans prepared by Fred A. Henderich, St. Augustine, Fla., for erection of hotel at St. Petersburg; four stories; 250 rooms; estimated cost, \$100,000.

MISCELLANEOUS STRUCTURES

Anderson, S. C.—Lodge Building.—Woodmen of the World will erect lodge building; three stories; cost, including site, about \$30,000; G. N. C. Coleman, chairman of building committee.

Argenta, Station Little Rock, Ark.—Business Building.—C. J. Lincoln, Little Rock, Ark., will erect business building; two stories and basement; brick; third story contemplated.

Austin, Texas—Y. M. C. A. Building.—Bids addressed to T. U. Taylor, president board of directors, care of George A. Endress, Bosche Bldg., Austin, will be opened March 10 for erection of brick and stone association building; certified check for \$1000; plans and specifications on file at office of George A. Endress, architect, Bosche Bldg., Austin.

Baltimore, Md.—Store and Dwelling.—H. G. Wolf, 1600 West Lanvale St., will erect drug store and dwelling at Belair road and Overlea avenue.

Baltimore, Md.—Store Building.—Contractors estimating on construction of proposed addition to store building for Hecht Bros., proprietors of The Hub, Baltimore and Charles Sts., include Charles L. Stockhausen, National Marine Bldg.; Morrow Bros., 218 West Saratoga St.; George Bunnells & Son, 306 St. Paul St.; Edward Brady & Sons, 1109-1113 Cathedral St.; Engineering-Contracting Co., 207 American Building, and J. Henry Miller, 110 Dover St., all of Baltimore; structure will be five stories; 45x80 feet; facade will conform with present structure; large windows rising entire height of building; floor levels outlined with ornamental cast-iron facia; cold-storage in basement for storing furs during summer; will connect with present structure by tunnel under Bank lane and bridges above; plans by Parker, Thomas & Rice, Union Trust Bldg., Baltimore. (Previously mentioned.)

Beaumont, Texas—Store Building.—Mrs. Nell Stark, Dallas, Texas, will expend about \$25,000 for improvements to store building occupied by Hecht-Moke Clothing Co. at Beaumont, including solid plate-glass front extending entire length of building; additional story contemplated.

Benton, Ark.—Business Building.—J. M. Caldwell will erect two-story brick business building.

Birmingham, Ala.—Business Building.—Frank S. White will erect three-story business building, to be occupied by Collins Grocery Co.

Birmingham, Ala.—Business Building.—Feenker Blacksmithing Co. will erect wholesale building.

Birmingham, Ala.—Dr. W. P. McAdory will erect infirmary; two stories; brick; ordinary construction; hot-air furnace; gas and electric lights; plans by Miller & Martin, Birmingham; cost \$15,000.

Brady, Texas—Business Building.—J. B. Calhoun will erect brick business building.

Jennings, La.—Clubhouse.—Jennings Lawn Tennis Club, recently reported incorporated, has had plans prepared by C. H. Page, Jr., Austin, Texas, for proposed clubhouse.

building; two stories; brick; 40x80 feet; cost about \$6000.

Charlotte, N. C.—Clubhouse.—Southern Manufacturers' Club Co., R. M. Miller, Jr., chairman building committee, will open bids March 9 for erection of clubhouse recently mentioned; steam heating plant; electricity and gas; freight and passenger elevators; cost \$60,000; plans and specifications on file at office of Hook & Rogers, architects, Charlotte; proposals must state time required to complete building from date of signing contract.

Chattanooga, Tenn.—Restaurant, etc.—Misses Lizzie F., Fannie W. and Lucy G. Boyce, H. T. Almsted & Son, agents, 115 East 8th St., Chattanooga, will erect three-story brick building at 1233 Market street and build third story to two-story brick building at 1275, 1277 and 1279 Market street; R. H. Hunt, James Bldg., Chattanooga, will prepare plans; Keith Bros., 1279 Market St., will occupy second and third stories of four buildings as hotel; grade floor of 1273 Market street for store.

Columbia, S. C.—Store and Apartment Building.—Consolidated Holding Co. awarded contract to John J. Cain, Columbia, for erection of proposed store and apartment building; Bedford stone and pressed-brick front; gravel roof; fireplaces and mantels; electric wiring; metal ceilings for stores; plate-glass fronts; freight elevators; tile vestibules; patent plaster; cost about \$12,000; plans by Hamby & Hamby, 412 National Loan and Exchange Bank, Columbia.

Corpus Christi, Texas—Sanitarium.—Shell Beach Sanitarium Co. incorporated with \$30,000 capital stock by W. E. Carruth, W. E. Ellison, Thomas Turpin and H. R. Sutherland.

Corsicana, Texas—Natatorium.—R. Caldwell, Carter Kiven, Jr., B. B. Simkins and others are promoting erection of natatorium; two-story structure; 70x150 feet; pool 40x90 feet; vapor and Turkish baths; steam heat.

Crowell, Texas—Business Building.—Massie & Jones awarded contract to Tom Parnell, Fort Worth, Texas, for erection of brick business building; 50x100 feet.

Dallas, Texas—Rhodes S. Baker will erect store and office building; plans by C. D. Hill & Co., Dallas; structure will be two stories and basement; steam heat; electric lights; artesian water; cost \$20,000.

Denison, Texas—Lodge Building.—Live Oak Camp No. 11, Woodmen of World, will erect two-story lodge building.

Durant, Okla.—Lodge Building.—Durant Lodge, No. 33, I. O. O. F., and Lingnum Vitae Lodge, No. 558, Woodmen of World, will erect joint lodge and business building; two stories; brick with stone trimmings; 45x110 feet; each story 16 feet high; faced red pressed-brick front, with marble finish concrete trimmings; three large arches will form entrances, and at each side of building two Colonial columns will support front of upper story; between arches single column will be placed; behind arch front of lower floor will be six-foot recess just in front of plate-glass front on lower floor; lower floor will have concrete floor; lodgeroom on upper floor will be 43 feet 6 inches by 68 feet; balcony on two sides; banquet hall 20x40 feet; both of these rooms will have metal ceilings; cost about \$12,000.

El Reno, Okla.—Business Building.—Frank Swaggart will erect business building; fireproof; four stories; brick; stone trimmings; reinforced concrete floors; 25x125 feet.

Frederick, Md.—Horticultural Hall.—Farmers' Midwinter Exhibit Association, Louis F. Kefauver, Middletown, Md., president, is planning erection of \$15,000 horticultural hall at Frederick.

Fort Worth, Texas—Business Building.—Mrs. Dan Waggoner will erect business building; three stories; brick; 60x36 feet.

Gloster, La.—Dowling Bros., Ltd., will erect general store; brick; 100x30 feet; ordinary construction; open chimney; acetylene gas; cost \$2500.

Goldsboro, N. C.—J. A. Norwood, Jr., chairman building committee, has had plans prepared by H. E. Bonitz, Wilmington, N. C., for erection of hospital; three stories; brick; ordinary construction; hot-air with fans; electric lights; electric passenger elevators; will install drying-room for laundry; cost \$16,000; contract will be awarded March 15. Address correspondence to H. E. Bonitz, Wilmington. (See "Machinery Wanted.")

Hagerstown, Md.—Business Building.—R. M. Hayes & Bro. will erect three-story business building.

Jennings, La.—Clubhouse.—Jennings Lawn Tennis Club, recently reported incorporated, has had plans prepared by C. H. Page, Jr., Austin, Texas, for proposed clubhouse.

Lexington, Ky.—Clubhouse.—Fayette Gun Club awarded contract to Combs Lumber Co., Lexington, for erection of proposed clubhouse; plans by Anderson & Frankel, Lexington.

Memphis, Tenn.—Store Building.—R. Brinkley Snowden awarded contract to J. W. Williams, Memphis, for erection of store building recently mentioned; three stories; brick; hot-water heat; cost \$21,000; plans by Hunker & Cairns, Memphis.

Memphis, Tenn.—Store Building.—Gulon & Co. awarded contract to Ramsey & Whittington, Memphis, for erection of store building; two stories; brick; stone trimmings; cost \$200.

Norfolk, Va.—Store and Dwelling.—Mrs. Ellen Walsh awarded contract to K. L. Reynolds, Norfolk, for erection of store and dwelling; two stories; cost \$3123.

Pine Bluff, Ark.—Store Building.—J. W. Tarver will erect brick store building.

Port Arthur, Texas—Store and Office Building.—Laughlin & Barrier will erect store and office building; 50x140 feet; three stories; brick and reinforced concrete; steam heat; cost \$35,000. (Recently mentioned. See "Machinery Wanted.")

Port Arthur, Texas—Store and Office Building.—Port Arthur Realty Co. will erect business building; three stories; brick or concrete; storerooms on first floor to have plate-glass fronts; art glass awning; cost about \$45,000.

Quitman, Ga.—Business Building.—A. Sweat has awarded contract to J. W. Dukes, Quitman, for erection of proposed building; two stories; four stores on main floor; brick; cost \$10,000; J. W. Camp, Jacksonville, Fla., lately noted as preparing plans.

San Antonio, Texas—Store Building.—William Appman will erect additional story to the J. C. Faubon Drug Store; 125x130 feet; cost about \$30,000.

San Antonio, Texas—Store Building.—Josie Bros. will erect two additional stories to store building; cost \$30,000.

Shreveport, La.—Business Building.—T. T. Hagens awarded contract at \$5933 to P. Martineau, Shreveport, for erection of business building; two stories.

Stamford, Texas—Store Building.—Penick-Hughes Company will receive bids until March 20 for erection of store building; three stories; brick; 75x165 feet; certified check for 2 per cent. amount of bids; plans and specifications on file at office of S. B. Elliott, architect, Stamford, or can be had on deposit of certified check for \$10, to be returned in five days.

Steeltown, W. Va.—Infirmary.—Weitzel company will erect infirmary at Steeltown; brick construction; cost about \$18,000. Address County Commissioners.

St. Louis, Mo.—Clubhouse.—Tower Grove Turnverein Association has had plans prepared by William Lucas, St. Louis, for clubhouse; five stories; brick; 122x103 feet; cost \$200,000.

St. Louis, Mo.—Clubhouse.—Order of Rallway Telegraphers, Leon T. Quick, Grand Secretary, has had plans prepared for clubhouse; four stories; brick; cost about \$50,000.

St. Petersburg, Fla.—Natatorium.—J. Darrow contemplates erection of natatorium.

Tampa, Fla.—Store Building.—Fielder & Mitchell have purchased site 105x70 feet, and will erect two-story brick store building.

Thorndale, Texas—Business Building.—John Kelachnick will erect business building; one story; two large and two small prison apartments; police offices; brick and reinforced concrete construction; fireproof; natural-gas heat; electric lights; cost \$6000; contract not awarded.

vator; bay windows on second floor; basement will contain bowling alley, swimming pool, machinery and boiler room; banquet hall, 70x30 feet, and alumni hall, 22x48 feet, will be on seventh floor; roof garden; roof will be ornamented with pergola; mezzanine floor over part of eighth floor; cost about \$250,000.

Wharton, Texas—Business Building.—T. Gordon will erect two-story brick business building.

Wharton, Texas—Business Building.—R. M. Flannagan will erect two-story brick business building.

Wheeling, W. Va.—Business Building.—H. C. Franzelius Company will erect business building; fireproof; six stories; steel framework; wrought-iron marquise, covered with wire glass, will extend over pavement.

Winchester, Ky.—Business Building.—Vic Bloomfield will erect three-story business building.

Winston-Salem, N. C.—R. J. Reynolds awarded contract to Fogle Bros., Winston-Salem, for erection of proposed department-store building; 48x90 feet; three stories and basement; brick; gravel roof; mill construction; stove heat; electric and gas lighting; combined passenger and freight elevator; cost about \$20,000; plans by H. C. Northup, Winston-Salem. (See "Machinery Wanted.")

MUNICIPAL BUILDINGS

Alabama City, Ala.—Library.—A. D. Simpson, Gadsden, Ala., is preparing plans for addition to library at Alabama City.

Baltimore, Md.—Fireboat Station.—Fire Board, Edward M. Parrish, president, requested Edward A. Preston, Building Inspector, City Hall, to prepare plans and specifications for fireboat station to be erected on Pier 7.

Covington, La.—Park Pavilion.—City is having plans prepared by Architect Beck, Covington, for erection of park pavilion; cost \$2500.

Mena, Ark.—Jail.—Board of Public Affairs awarded contract to Lon Goff of Mena for erection of municipal jail; 20x28 feet; concrete; two apartments.

Kansas City, Mo.—Armory, etc.—City will vote April 6 on issuance of \$4,500,000 of bonds, \$250,000 to be used for Third Regiment Armory, \$75,000 for Battery B Armory, \$175,000 for art museum, \$50,000 for House of Correction and \$25,000 for tuberculosis hospital; James L. Darnell, City Engineer.

St. Louis, Mo.—Engine-house.—Board of Public Improvements awarded contract at \$14,988 to Gillick Bros., St. Louis, for construction of engine house No. 37.

Tampa, Fla.—Hospital.—City is considering issuance of bonds for erection of municipal hospital. Address The Mayor.

Texarkana, Texas—City Jail.—City has had plans prepared by H. R. Carter, City Engineer, for erection of proposed jail; one story; two large and two small prison apartments; police offices; brick and reinforced concrete construction; fireproof; natural-gas heat; electric lights; cost \$6000; contract not awarded.

RAILWAY STATIONS

Argenta, Ind. Sta., Little Rock, Ark.—St. Louis Southwestern Railway, M. L. Lynch, chief engineer, Tyler, Texas, is planning, it is reported, erection of depot at Argenta.

Baltimore, Md.—Pennsylvania Railroad Co. has not announced plans for construction of proposed union station heretofore mentioned; company contemplates abandoning Calvert Station as a passenger depot and using it entirely for freight service, and constructing freight tunnel under Baltimore to obviate constructing freight "cutoff." Conference with Municipal Union Terminal Commission was not followed by any authoritative announcement relative to station, which has been reported as to be third largest on Pennsylvania system. James McCrean is president and A. C. Shand is chief engineer; offices in Broad Street Station, Philadelphia, Pa.

Houston, Texas—Missouri, Kansas & Texas Railway will expend about \$7000 in remodeling freight station. J. W. Petheram, Dallas, Texas, is chief engineer. (See "Railway Shops, Terminals, Roundhouses, etc.")

Rome, Ga.—Rome Railway & Light Co. plans to build transfer station; 100 feet long; tile roof; concrete flooring; stone office; electric lighting; S. S. Bush, president, Louisville, Ky.

Ruston, La.—Chicago, Rock Island & Pacific Railway, J. B. Berry, chief engineer, Chicago, Ill., and Vicksburg, Shreveport & Pacific Railway (Queen & Crescent Route), A. A. Woods, resident engineer, Vicksburg, Miss., reported to expend \$30,000 in erection

of union passenger station, recently mentioned, and brick freight depot to cost \$15,000. (See "Railway Shops, Terminals, Roundhouses, etc.")

Smithville, Texas.—Missouri, Kansas & Texas Railway, S. B. Fisher, consulting engineer, St. Louis, Mo., has appropriated \$20,000 for station at Smithville. (See "Railway Shops, Terminals, Roundhouses, etc.")

Waco, Texas.—St. Louis Southwestern Railway, M. L. Lynch, chief engineer, Tyler, Texas, will erect freight depot at Waco.

SCHOOLS

Alabama City, Ala.—City is having plans prepared by A. D. Simpson, Gadsden, Ala., for addition to school building. Address The Mayor.

Amite City, La.—Amite School District contemplates erection of \$30,000 brick school building. Address Parish Commissioners.

Annapolis, Md.—St. John's College, Dr. Thos. Fell, president, contemplates erection of \$100,000 structure to replace burned McDowell Hall; plans will probably be prepared by Wyatt & Nolting, Keyser Bldg., Baltimore, Md. (Recently mentioned.)

Anderson, S. C.—City contemplates erection of school building to accommodate at least 500 children; J. L. Sherard, Mayor.

Anderson, S. C.—City contemplates issuing bonds for erection of \$20,000 school building. Address The Mayor.

Athens, Tenn.—City recently noted to award contract at \$11,986 to Athens Planing Mill, Athens, for erection of school building; will erect structure 75 feet 6 inches by 82 feet 5 inches; two stories; 12-inch brick walls; tar and gravel roof; steam heat; electric lights; plans by Adams & Alsop, Chattanooga, Tenn. (See "Machinery Wanted.")

Atlanta, Ga.—Bishop C. K. Nelson has had plans prepared by Henrietta C. Dozier, Peters Bldg., Atlanta, for school for girls recently noted; brick and concrete; about 60x150 feet; three stories and basement; fireproof construction; steam or hot-water heat; electric and gas lights; cost about \$40,000.

Baltimore, Md.—Bids will be opened March 10 at office of J. Sewell Thomas, City Register, City Hall, for erection of school building at Mulberry & Payson streets; certified check for \$500 on some clearing-house bank, payable to the Mayor and City Council of Baltimore; proposals must be on form at end of printed form of specifications and must be attached; plans and specifications on file at office of Edward D. Preston, Inspector of Buildings, City Hall; J. Barry Mahool, president Board of Awards; plans by Theodore Wells Pietsch, American Bldg., Baltimore. (Previously mentioned.)

Charleston, Ark.—City contemplates erection of school building. Address The Mayor.

Clarendon, Texas.—Trustees of Clarendon College will erect three-story brick dormitory for girls; cost \$30,000. Address C. M. N. Ferguson, Box 63, Clarendon, Texas.

Columbia, S. C.—City has purchased site 104x208 feet and will erect school building. Address The Mayor.

Covington, La.—City will vote March 23 on \$40,000 bond issue for completion of school building. Address The Mayor.

Dallas, Texas.—City will probably vote in April on \$25,000 bond issue for erection of school building. Address The Mayor.

Davidson, N. C.—Davidson College, Dr. Henry L. Smith, president, will erect dormitory building; 107x44 feet; three stories; 33 rooms and 3 bathrooms; unit brick; ordinary construction; low-pressure steam heat; steam furnished by central heating plant; electric lighting plant; cost \$12,000; Wm. J. Martin, Davidson, N. C., is in charge of construction.

Decatur, Ga.—City has accepted plans by Eugene C. Wachendorff, Atlanta, Ga., for proposed \$15,000 school building; 11 classrooms, with total seating capacity of 578; auditorium extension with seating capacity of 506; boiler and fuel rooms in basement; modern plumbing and heating systems.

Depew, Okla.—City has had plans prepared by Architect Walker, Sapulpa, Okla., for proposed \$5000 school building.

Fitzgerald, Ga.—City awarded contract to Little & Phillips, Cordele, Ga., for erection of school building, recently mentioned, and to Atlanta Steam Heating Co., Atlanta, Ga., for heating plant; 12 rooms; brick; tile roof; amount of both contracts \$27,891; plans by Edwards & Walters, 613 Chandler Bldg., Atlanta, Ga.

Gadsden, Ala.—City will vote March 24 on \$75,000 bond issue for erection of new school and repairing old buildings. Address The Mayor. (Recently mentioned.)

Gulford College, N. C.—Gulford College

has had plans prepared by Rose & Weston, Greensboro, N. C., for erection of library; one story; 12x76 feet, with rear 27x76 feet; part fireproof; finished in oak; steam heat; electric lights; cost \$20,000; J. T. Hunt & Co., Greensboro, contractors.

Hill Top, W. Va.—West Virginia Seminary and Industrial School is planning to rebuild school building previously reported burned; loss \$12,000; has asked Legislature for appropriation of \$10,000; brick and stone structure; to cost \$25,000.

Hopkinsville, Ky.—Superintendent of Education County and City Schools has had plans prepared by James Lee Long, Box 238, Hopkinsville, for erection of county and city schools; ordinary and fireproof construction; hot-water heating; gas and electric lighting; estimated cost of completed buildings, \$50,000.

Knoxville, Tenn.—City will issue \$150,000 of bonds for erection of high school; fireproof; two large study halls, each with seating capacity of 350; rooms for manual and industrial training; domestic sciences, etc.; chemical and philosophical laboratories and gymnasium will be provided; heating and ventilating systems. Address The Mayor. (Recently mentioned.)

Lawton, Okla.—City is having plans prepared by Hair & Smith, Chickasha, Okla., for high-school building. (Bond issue recently noted.)

Lenox, Tenn.—City will issue \$50,000 bonds for erection of school building. Address The Mayor.

Loch Raven, Md.—Maryland School for Boys awarded contract at \$109,000 to John Cowan, 106 West Madison St., Baltimore, for erection of administration building and three cottages, recently mentioned; administration building will be T-shaped; 126 feet 4 inches by 104 feet 8 inches; reinforced concrete; mission style; massive marble columns; concrete foundation; two stories; fireproof construction; tile and copper roofing; electric lights; steam heat; cottages will be 2½ stories; 46x60 feet; reinforced concrete; contract for road awarded, at \$10,470, to Arthur L. Shreeve & Co., 331 Dolphin St., Baltimore, and to Wm. H. Rothrock & Co., 23-25 Light St., Baltimore, at \$1100, for extension of water system; plans by Wyatt & Nolting, Keyser Bldg., Baltimore.

Newport News, Va.—City contemplates issuance of \$15,000 of bonds for erection of school building. Address The Mayor.

Paragould, Ark.—City recently reported as having awarded contract to Southern Building Co., Louisville, Ky., for erection of proposed school; will erect three-story brick building; steam heat; cost \$30,000; plans by John A. Hood, Paragould.

Richmond, Va.—Finance Committee included in budget for 1909, submitted to City Council, \$15,352.50 for schools; Charles E. Bolling, City Engineer.

Stamford, Texas.—Stamford Collegiate Institute reported arranging to erect \$40,000 dormitory.

St. Louis, Mo.—City awarded contract to Wall Bros., St. Louis, for erection of addition to Harrison School; brick and steel; nine rooms; 70x80 feet; cost about \$98,000; plans by William B. Ittner, St. Louis.

University City, St. Louis, Mo.—American Woman's League, care of Lewis Publishing Co., has had plans prepared by Eames & Young, St. Louis, for proposed art institute and school; 200x200 feet; reinforced concrete faced with buff brick and terra-cotta; fireproof; freight elevator; building to be heated from adjoining building; cost \$200,000. (Recently noted under "Miscellaneous Structures.")

Van Alstyne, Texas.—City will vote April 3 on \$25,000 bond issue for erection of school building. Address The Mayor.

THEATERS

Baltimore, Md.—E. Potts awarded contract to William Gaken, 2339 McElberry St., Baltimore, for moving-picture theater at 2110 East Monument street; one story; brick; Carey roofing; 14x90 feet; hot-air heating; front of ornamental metal with varicolored electric lights.

Baltimore, Md.—S. Lubin, Philadelphia, Pa., reported to erect moving-picture theater to cost about \$100,000; Edward C. Earle, resident manager, 404 East Baltimore St., Baltimore.

Baltimore, Md.—Gilmor Amusement Co. has had plans prepared by John K. Stack, 12 East Lexington St., and awarded contract to Wm. F. Welsh, 250 West Preston St., both of Baltimore, for erection of moving-picture theater; auditorium to be in rear of 314 North Gilmor street; dwelling front will be remodeled; cost about \$40,000.

Bristol, Va.—Charles M. Hagan has

had plans prepared for remodeling Nos. 644 and 646 State street (Jeff Block) as theater; seating capacity to be 800.

Childress, Texas.—Board of Trade is interested in erection of opera-house to cost about \$16,000.

Durham, N. C.—E. J. Parrish has had plans prepared by O. F. Wilkerson, Durham, for erection of theater; 73x110 feet; five stories; seating capacity 500; white pressed brick; stone and ornamental relief work; ordinary construction; steam from adjoining building; electric lights; cost \$12,000; O. F. Wilkerson, Durham, contractor. (See "Machinery Wanted.")

Houston, Texas.—Jesse H. Jones will erect reinforced-concrete fireproof building.

Lexington, Ky.—L. H. Ramsey and others are interested in erection of theater-building, to include stores and offices; theater will have seating capacity of 750; estimated cost \$100,000.

Sapulpa, Okla.—H. H. McFann, E. C. Raynolds, J. P. Soliss and others have organized company with \$50,000 capital stock to erect theater.

Westernport, Md.—James Welsh will erect theater.

WAREHOUSES

Anderson, S. C.—Petroleum Oil Co., C. A. Gambrill, president, will rebuild warehouse and stables reported burned.

Baltimore, Md.—Standard Oil Co. planning to build proposed \$100,000 warehouse on Pier 2; Baltimore office in Maryland Trust Bldg.; New York office at 26 Broadway.

Baltimore, Md.—Charles H. Kaufman, Kaufman's Fireproof Storage Warehouse, 508 West Lafayette Ave., will erect warehouse at 145 and 147 Brunt street; five stories; brick; 25x56 feet; mill construction; steam heat; electric wiring; electric elevator; cost about \$6000; plans and specifications prepared by George R. Morris, Equitable Bldg., Baltimore.

Butler, Ga.—Company has been organized with C. H. Neisler, president, to erect cotton warehouse. (See "Miscellaneous Manufacturing Plants.")

Gainesville, Fla.—Gainesville Hardware Co. will erect warehouse about 40x150 feet.

Glasgow, Ky.—Planters' Loose Leaf Tobacco Co. Incorporated with \$25,000 capital stock; will erect warehouse 150x200 feet; R. H. Barton, president; Lawrence G. Warder, vice-president; B. C. Bettison, secretary-treasurer.

Knoxville, Tenn.—W. W. Woodruff Hardware Co. will erect warehouse.

Norfolk, Va.—J. W. Gamage is having plans prepared by Benjamin F. Mitchell of Norfolk for erection of warehouse; brick; 100x210 feet; cost about \$15,000; bids will probably soon be invited.

Portsmouth, Va.—Tidewater Mills will erect brick warehouse, 120x65 feet.

St. Augustine, Fla.—Amos W. Corbett has had plans prepared by Robinson & Reidy, St. Augustine, for erection of two warehouses and large dock on San Sebastian River; one warehouse 60x144 feet, one 30x80 feet.

St. Louis, Mo.—Manufacturers' Railway (controlled by Anheuser-Busch Brewing Association, August A. Busch, vice-president) reported to construct warehouses on right of way and at freight yards in St. Louis county. G. T. Moore is president.

Uvalde, Texas.—Company has been organized with L. Schwartz president, L. O. Lanturn vice-president, and William Stevenson secretary-treasurer, to erect bonded warehouse for cotton, wool and mohair.

RAILROAD CONSTRUCTION

RAILWAYS

Aberdeen, N. C.—President Henry A. Page of the Aberdeen & Ashboro Railway writes the Manufacturers' Record about the proposed extension reported, saying the company is considering about building from some point in Montgomery county to Rockingham or through Rockingham to some other point in Richmond county, but there is no purpose to connect the Aberdeen & Ashboro Railroad with the Bennettsville & Cheraw Railroad, as was suggested. A press report from Cheraw says that the Pee Dee

Valley Railroad has been chartered to build from Candor, on the Aberdeen & Ashboro via Ellerbe Springs, and Rockingham to Killoch's, on the Bennettsville & Cheraw, and thence to the wharf of the Cheraw & Georgetown Steamboat Co., about 40 miles.

Aberdeen, Miss.—Reported that construction plans for the Aberdeen & Tombigbee Valley Railroad will again be taken up,

financing being about arranged. H. E. Reynolds, Aberdeen, Miss., is president.

Arcadia, Fla.—The Charlotte Harbor & Northern Railway Co., it is reported, has decided to immediately build an extension from Arcadia north to Plant City. L. M. Fouts is general manager at Jacksonville, Fla., and G. S. Bruch is chief engineer at Hull, Fla. James M. Gifford, 5 Nassau St., New York, is president.

Austin, Texas.—The Manufacturers' Record is informed that Mr. Thomas Moore has made a proposition to the committee on the Texas Interurban Railway for the construction of its proposed line from Austin to Lockhart, Texas, about 30 miles. He has completed three surveys and prepared maps, profiles and estimates. The proposition relates to a bonus necessary to insure placing of the bonds. He says he is in a position to promptly construct a line if co-operation is given.

Baton Rouge, La.—An officer of the Yazoo & Mississippi Valley Railroad writes the Manufacturers' Record denying the press report that the company contemplated building a bridge across the Mississippi River at Baton Rouge.

Bessemer, Ala.—Rumored that the Louisville & Nashville Railroad contemplates building the line between Bessemer and Pelham, Ala., on which the grading has been done some time. W. H. Courtenay is chief engineer at Louisville, Ky.

Brewton, Ala.—The Cedar Creek Mill Co. of Brewton writes the Manufacturers' Record denying the report that the company intends to extend its railroad. No extension is contemplated at present.

Bryan, Texas.—Theodore Stebbins, representing the Texas Traction Co., which operates the electric railway from Dallas to Sherman, Texas, has, it is reported, made an investigation concerning the proposed railway from Bryan to the State Agricultural and Mechanical College.

Buffalo, Okla.—A movement is under way to build a railroad. James Fair is chairman and B. M. Lynch secretary.

Burlington, N. C.—C. C. Jacobs of Cincinnati, contractor for the line of the Burghaw Traction Co., is preparing to begin work.

Carizzo Springs, Texas.—The Asherton & Gulf Railroad (otherwise the Nueces Valley, Rio Grande & Mexico) is reported to have completed about 20 miles of grade on its line from Artesia to Asherton. R. H. Gresham of San Antonio, Texas, is chief engineer.

Centerville, Tenn.—An officer of the Nashville, Chattanooga & St. Louis Railway, in a letter to the Manufacturers' Record, denies the report that a line is contemplated to Perryville, saying that the survey on the Centerville branch is for a short revision of grade at one or two points.

Cookeville, Tenn.—Rutledge Smith of Cookeville, representing capitalists, is reported to be investigating to build a railroad from Cookeville to Sparta, Tenn., 18 miles. It is to reach coal fields in Van Buren county.

Corsicana, Texas.—An officer of the proposed Palestine & Dallas Interurban Railway is reported as saying that contracts are to be let in May to build from Palestine northwest via Corsicana and Waxahachie to Dallas, 110 miles, with a branch from Waxahachie to Ennis, 10 miles. J. D. Watkins is president and G. A. Duren, chief engineer at Corsicana.

Crowley, La.—C. C. Genung, civil engineer, 233 Upper 3d St., Evansville, Ind., has made a preliminary investigation for a railroad contemplated between Crowley and Lake Arthur, La.

Dalhart, Texas.—The Mountain, Valley & Plains Railroad Co., recently chartered in Texas, has also been incorporated in Oklahoma to build its proposed line of 196 miles; capital \$500,000. Del W. Harrington of Dalhart, Texas; H. S. Wannamaker of Amarillo, N. M.; J. M. Cogan of Canton, Ohio; E. C. Gray of Higgins, Texas; A. E. Thompson of Berea, Ky., and others are interested.

Decatur, Tenn.—Reported that the East Tennessee Railroad Company has organized and contemplates building a railroad from Chattanooga to Knoxville. W. L. Abel is president and J. W. Lillard secretary and treasurer at Decatur. J. W. Stewart is engineer.

Deweyville, Texas.—Reported that the Sabine & Northern Railroad, owned by the Sabine Tramway & Lumber Co. of Deweyville, will build an extension of six miles from its southern terminal to Merryville, La., on the Jasper & Eastern Railway of the Santa Fe system.

Eddy, Texas.—Rumored that the Missouri, Kansas & Texas Railway will establish division terminals at Eddy and will spend there

about \$200,000. J. W. Petheram is chief engineer at Dallas, Texas.

Elberton, Ga.—Guy G. Rucker of Ruckersville, Ga., has, it is reported, proposed the construction of an electric railway from Iva, S. C., via Ruckersville to Elberton, Ga. Connection may be made with the line of the Anderson (S. C.) Traction Co.'s line at Gluck Mills.

Eufaula, Ala.—A mass-meeting has asked the City Council to appropriate \$20,000 toward the building of a proposed railroad from Eufaula to Abbeville, 28 miles. Other funds are to be raised by subscription. The Mayor may be able to give information.

Evenwood, W. Va.—An officer of the Sewell Valley Railroad is reported as saying that the Morasco-Pasqua-Lichie Company has been given a contract to build two miles of line on the railroad which is being built from Meadow Creek to coal and timber lands, 21 miles. The company is building the rest. Grading is reported finished about two-fifths of the distance to the mouth of Sewell Creek.

Flovilla, Ga.—Reported that grading is under way for an electric railway between Indian Springs and Bibb, Ga., on the Southern Railway, and it may be extended from Griffin to Jackson and Monticello. W. F. Smith of Flovilla may be able to give information.

Fort Payne, Ala.—H. T. Henderson, president of the Alabama Railway & Power Co., informs the Manufacturers' Record that the projected electric railway from Birmingham to Chattanooga is not completed at present, although a hydro-electric plant is proposed. He is chief engineer of the Henderson Engineering Co. of Durango, Col. Other officers of the railway are J. H. Hill of Fort Payne, Ala., vice-president, and C. L. Young, Jr., of Durango, Col., secretary and treasurer. Mr. Young is also in the engineering company with John W. Lillard and Virgil B. Stone.

Gainesville, Ga.—President G. J. Baldwin of the Gainesville Midland Railway is reported as saying that the gauge between Belmont and Monroe will be made standard, and a survey has been ordered. E. L. Douglas is general manager at Gainesville.

Gassaway, W. Va.—The Coal & Coke Railway, it is reported, will build an extension from Gassaway to Sutton, W. Va. R. H. Pembroke is chief engineer at Elkins, W. Va.

Graham, Texas.—An official letter to the Manufacturers' Record says that the Rock Island has not definitely decided whether the line from Graham to Stamford, Texas, will be built.

Henderson, Ky.—Reported that George F. Swin of Calhoun, Ky., will organize a company composed of residents of Evansville, Ind., and Owensboro, Calhoun and Bowling Green, Ky., to build line from Evansville to Bowling Green via Henderson, Livermore and Calhoun.

Houston, Texas.—The Missouri, Kansas & Texas Railway, it is reported, will build three or four miles of yard tracks at Eureka, near Houston. Other improvements are to be made in the city. J. W. Petheram is chief engineer at Dallas, Texas.

Independence, Mo.—E. M. Stayton of Independence, chief engineer, has, it is reported, made a survey covering 42 miles for the proposed electric railway from Independence southeast.

Jackson, Texas.—Holland & Bowers are reported to have taken a subcontract at Jackson on the Gulf, Texas & Western Railway.

Jacksonville, Fla.—The Southern Railway, it is reported, contemplates building additional freight-yard tracks in Jacksonville, besides making other improvements. W. H. Wells is engineer of construction at Washington, D. C.

Johnson City, Tenn.—An officer of the Carolina, Clinchfield & Ohio Railway informs the Manufacturers' Record that the company has requested bids for constructing 40 miles of line from a point near St. Paul, Va., northward to connect with the Chesapeake & Ohio Railway at Elkhorn City, Ky. Final decision as to whether the line will be built is expected within a few weeks. The route is through a country as rough as any through which any part of the road has been built. A. W. Jones is assistant chief engineer, and Ward Crosby is division engineer in charge of construction.

Kansas City, Mo.—The Jackson County Railway Co. in Missouri and the Kansas City Junction Railway Co. in Kansas are reported incorporated to build at and near Kansas City. George Townsend of Indianapolis, Ind., is reported to head a syndicate for these enterprises, which will construct a belt line or a connecting railway.

Kansas City, Mo.—The Missouri River &

Cameron Railroad Co. has been granted a charter to build its proposed line, about six miles long, from Camden Point to connect with the Chicago Great Western Railroad. A syndicate represented by George Townsend of Indianapolis is said to be interested, and it is also concerned in the Kansas City Junction Railway Co., lately incorporated in Kansas.

Kingsville, Texas.—An officer of the St. Louis, Brownsville & Mexico Railway is reported as saying that the spur from Buckeye, Texas, has been extended to a length of 9 miles, and may be continued 11 miles more. Survey has been made for a spur two miles long from Donna, Texas, to Sugar Mills. E. C. Burgess is resident engineer at Kingsville, Texas.

Lafayette, Ga.—Concerning the charter of the Lafayette Railroad Co., Mr. J. A. Kauffman, first vice-president and general manager, informs the Manufacturers' Record that the company expects to construct a short line of railroad from Lafayette, Ga., to a connection on the Chattanooga Southern Railway, five miles. The other officers are H. T. Kincaid, president, and Col. T. J. Kauffman, secretary and treasurer, both of Dayton, Ohio; R. M. W. Glenn, second vice-president and general counsel; W. D. Morrison, assistant secretary; S. A. Hunt, assistant treasurer, all of Lafayette, Ga.; H. R. Klepinger, chief engineer, and W. T. Sherman, assistant chief engineer, Dayton, Ohio. The directors include Messrs. Kincaid, J. A. and T. J. Kauffman, Glenn, R. N. Dickerson, S. A. Hunt, Jr., and S. M. Warthen. A good grade has been established, but no contracts are let.

Laporte, Texas.—A. N. McKay of Laporte, who was reported interested in a plan to build an electric railway from Laporte to Houston, is quoted as saying that he is not so interested, but inclines to favor the Stone & Webster proposition.

Lincolnton, N. C.—A letter to the Manufacturers' Record says that the Denver & Lincolnton Railway Co. has been granted a charter by the Legislature to build its proposed line from Lincolnton via Big Ore Bank to Denver, Truangle and Lowesville, N. C., about 25 miles. Edward W. Sheed of Carthage, N. C., and others are said to be interested in the road.

Lipan, Texas.—Reported that a bonus of \$17,500 has been raised and, with terminal grounds and right of way for six miles, will be given to the first railroad building into Lipan. W. J. McDaniel has made a survey from Tolar to Lipan.

Marshall, Texas.—An officer of the Marshall & East Texas Railway Co. informs the Manufacturers' Record that contract has been let to extend the line 12 miles south from Marshall. John Scott & Sons of St. Louis are the contractors. R. J. Lockwood is resident engineer. J. E. Votaw, general superintendent, will have charge of construction. It is intended to continue the extension to a point 35 or 40 miles from Marshall. A. T. Perkins of St. Louis is president.

McComb, Miss.—The Liberty-White Railroad Co. is reported to have finished survey from a point near Holmesville nearly to Tylertown and will soon complete it. W. M. White is general manager at McComb, Miss. He is reported as saying that an extension will be made from New Holmesville to either Natchez or Baton Rouge; also that a survey will be made to Columbia and probably to Hattiesburg.

Mechanicsville, Md.—An officer of the Washington, Potomac & Chesapeake Railroad Co. writes the Manufacturers' Record confirming the report that the company is offering \$200,000 of preferred stock to extend its line from Mechanicsville to Esperanza, Md., 24 miles, on which 20 miles are graded. Henry W. Watson, 905 Girard Bldg., Philadelphia, is president.

Mexico, Mo.—Engineers are reported to have started survey for an extension of the Mexico, Santa Fe & Perry Traction Co.'s line from Perry to Hannibal, Mo. Between Mexico and Perry about one-third of the line is graded, and work at Columbia and Fulton is to begin this spring.

Memphis, Tenn.—Headquarters are reported established at Room 6 Lee Building, Madison avenue and Main street, for the proposed electric railway from Memphis to Jackson, Tenn., although the line may reach Humboldt. Survey has been made as far as Covington via Woodstock, Rembert Springs, Millington, Kerrville, Munford and Melrose, and right of way has been secured. John B. Wheeler represents the syndicate.

Meridian, Miss.—Charles F. Scofield, 35 Wall St., New York, recently elected secretary of the Mississippi River & Western Railway Co., is reported to represent capitalists

who have become interested in the proposition. The line will be about 190 miles long, from Meridian via Hazlehurst to Natchez. Final survey, it is reported, has been decided upon. J. W. Hudson, vice-president, Hazlehurst, Miss., is reported as saying that work will begin immediately on permanent survey and construction. Mr. Scofield's local headquarters are also at Hazlehurst.

Moccasin Gap, Va.—Contract to complete the Holston River Railroad has been awarded by the Southern Railway to Lane Bros. & Jones of Baltimore, Md., and Charlottesville, Va. Line is 40 miles long, from Moccasin Gap, Va., to Persia, Tenn., and considerable grading was done prior to the panic. It is an extension from the Virginia Southwestern Railway, now controlled by the Southern. A press report says that the company is also surveying to continue the line from Persia to Bull's Gap, 10 miles. W. H. Wells is chief engineer of the Southern Railroad.

Morgantown, W. Va.—Reported that the proposed line of the Pittsburg & West Virginia Railway Co., in which W. E. Hildebrand of Pittsburg is interested, is from Fairmont, W. Va., via Morgantown, W. Va., to Point Marion, Smithfield, Fairchance and Uniontown, Pa., with a branch from Morgantown to Mount Morris and Waynesburg, Rice's Landing, Middleboro, Brownsville, California and Allenport, Pa., 140 miles altogether. Others interested are said to be George C. Sturgiss, David Elkins, E. M. Grant and J. H. McDermott of Morgantown, W. Va.; D. S. Walton, T. S. Wiseover and J. L. Lyons of Waynesburg, Pa.; James Ryan of Pittsburg is mentioned as engineer.

Muskogee, Okla.—An officer of the Missouri, Oklahoma & Gulf Railway writes the Manufacturers' Record that the company is considering the proposition to extend south this year. E. J. Noonan is chief engineer at Calvin, Okla.

Nashville, Ark.—The Memphis, Paris & Gulf Railway is reported to have completed tracklaying past a connection with the Prescott & Northwestern Railroad eight miles from Nashville.

Opelika, Ala.—Judson C. Chapman, 233 Century Bldg., Atlanta, Ga., vice-president of the Alabama Railway & Electric Co., is reported to have arranged to complete survey on the line from Opelika to Eufaula, Ala. Line is ultimately to reach the Gulf coast. A. M. Buchanan of Opelika, Ala., is president.

Orange Court House, Va.—Rumored that the Chesapeake & Ohio Railway contemplates making a survey either from Orange to Washington via Fredericksburg, or from Doswell to Washington via Fredericksburg. H. Pierce is engineer of construction at Richmond, Va.

Paint Rock, Texas.—A citizens' meeting is reported to have taken steps to raise \$100,000 in this (Concho) county to secure the construction of a railroad, perhaps the Abilene & Southern, which is now building from Abilene to Ballinger.

Palestine, Texas.—George W. Burkitt of Houston is quoted as saying that he will apply for a street-car franchise in Palestine and will organize a company to build an electric railway from Palestine to Dallas, Texas. He has an electric-light plant in Palestine.

Paris, Ark.—President J. H. Wright of the Arkansas Central Railroad Co., Fort Smith, Ark., informs the Manufacturers' Record that his company is in no way interested in the road which is being built from Paris, Ark., northeast to the new town of Scranton, Ark.

Parkersburg, W. Va.—Reported that the Zanesville & Meigs Valley Traction line will be built by Philadelphia capitalists from Parkersburg, W. Va., to Zanesville, Ohio, 58 miles. Work will begin this spring.

Pawhuska, Okla.—An officer of the Oklahoma & Golden City Railroad Co. informs the Manufacturers' Record that the company will build this year a standard-gauge steam railroad from Pawhuska, Okla., to Jefferson City, Mo., with a branch from Climax Springs to Springfield, Mo.; main line about 270 miles and branch 70 miles long. Principal towns to be connected are Pawhuska, Bartlesville and Miami, Okla.; Joplin, Carthage, Golden City, Stockton, Humansville, Preston, Climax Springs, Brazito and Jefferson City, Mo. An issue of 50-year 5 percent bonds has been authorized, and the company is arranging to float them. Survey to be resumed immediately and construction contracts to be let in April. E. M. Dempsey is president. Pawhuska, Okla.; John A. Wimberly of the same place and L. C. Lohman of Jefferson City, Mo., vice-presidents; W. H. Reed, secretary; W. P. Burns, treasurer.

urer, and John A. Griesel, general manager, all of Golden City, Mo.

Perry, Fla.—The Atlantic Coast Line, it is reported, contemplates building an extension from Perry to either Monticello, Fla., 30 miles, or Amsterdam, Fla., 60 miles. E. B. Pleasant is chief engineer at Wilmington, N. C.

Pittsboro, Va.—An officer of the Staunton Railroad is reported as saying that construction will not begin until late in the spring on the proposed line from Pittsboro to Brights, seven miles. J. H. C. Barr is president at 181 Land Title Bldg., Philadelphia. W. D. Parker is vice-president at Pittsboro, Va.

Plainview, Texas.—An official letter to the Manufacturers' Record denies the report that the Atchison, Topeka & Santa Fe proposes to build from Plainview to Lubbock, Texas. It has no engineers in the field and is doing no construction at present.

Reisterstown, Md.—Benjamin C. Green and Hiram Brown of Towson, Md., are reported to be surveying for the proposed Reisterstown & Hanover Railroad from Reisterstown, Md., to Hanover, Pa.

Rockport, Texas.—The Rockport & Aransas Pass Railroad Co. has been chartered to build a line from Rockport to the jetties at Aransas Pass, 11½ miles. C. G. Johnson, Harry Traylor, D. R. Scrivener and W. H. Baldwin of Rockport are among the incorporators.

Rusk, Texas.—The Texas & New Orleans Railroad branch from Rusk to Gallatin, Texas, eight miles, is reported nearly completed, and will probably be finished by April 1.

Salisbury, N. C.—Capt. E. O. Whittle is reported to have begun construction on the line of the Piedmont Electric Co. About one-third of the track has been laid.

San Antonio, Texas.—The San Antonio & Rio Grande Railroad, it is reported, has laid track for 16 miles northward from Ebenezer, Texas, which is on the Hidalgo branch of the St. Louis, Brownsville & Mexico Railroad. Sam Robertson of San Antonio is chief engineer.

San Marcos, Texas.—Joseph Jennings is reported to have secured the interest of Eastern capitalists in the proposed electric interurban railway from San Marcos to Luling, Texas, via Prairie Lea, Fentress and Martindale. It is expected that construction will soon begin.

Spring Hope, N. C.—The Montgomery Lumber Co. is reported to have built nine miles of its railroad out of Spring Hope and about four miles more are graded. G. I. Buell of Spring Hope is president.

St. Joseph, Mo.—Reported that C. R. Keyes, representing Eastern capitalists, contemplates building a railroad from St. Joseph, Mo., to Des Moines, Iowa, and another line to Princeton and Unionville, Mo. Application has been made for a franchise at Des Moines, where he may be addressed.

St. Louis, Mo.—The Manufacturers' Railroad proposes to establish large freight yards south of the city, and also contemplates building an extension and a belt line. A. Busch is president at St. Louis.

St. Mary's, Ga.—Reported that directors of the St. Mary's & Kingsland Railroad will meet soon to arrange for an extension from Kingsland to Waycross, Ga. Capt. L. Johnson of St. Mary's, Ga., is president, and E. J. Arline and D. B. Lester of Savannah, Ga., are also reported interested.

Sumter, S. C.—Reported that the Santee Cypress Lumber Co. contemplates extending its line three miles to Sumter.

Sylvester, Ga.—President G. F. Alford of the Gulf Line Railway Co. writes the Manufacturers' Record that an extension is contemplated from Bridgeboro to Camilla, Ga., 20 miles, and survey is being made which is expected to be continued farther south, about 30 miles. Details for construction are not yet settled.

Thomasville, N. C.—Capt. M. L. Jones writes the Manufacturers' Record that at present he has no information to give concerning the Piedmont Railway Co., recently organized to take over the Carolina Valley Railroad and extend it.

Thomasville, N. C.—The proposed extension of the Piedmont Railroad Co., formerly the Carolina Valley Railroad, will, it is reported, be made from Denton to Eldorado, N. C., 20 miles. M. L. Jones of Thomasville is president and general manager, the other members of the board being T. J. Jerome, vice-president; J. B. Jones, A. E. Jones, C. D. Jones, G. E. Crowell, F. S. Lambeth, J. W. Lambeth, Zed Griffith and J. H. Mock.

Valdosta, Ga.—Reported that A. F. Lang-

ford will begin construction immediately on the Valdosta & Moultrie Railroad.

Wichita Falls, Texas.—An officer of the Wichita Falls & Southern Railway writes the Manufacturers' Record that the company plans to do something in the near future on extending its line, which is now built from Wichita Falls to New Castle, 52 miles, and which is authorized to build 98 miles more to Cisco, Texas. Preliminary surveys are in progress to extend the Wichita Falls & Northwestern from Frederick, Okla., 30 miles more via Altus or Olustee, Okla. R. A. Thompson is chief engineer at Wichita Falls, Texas.

Winston-Salem, N. C.—President H. E. Fries of the Fries Manufacturing & Power Co. informs the Manufacturers' Record that there is no foundation for the press report that work might be resumed in March on the South Bound Railway.

STREET RAILWAYS

Anderson, S. C.—Stockholders of the Anderson Traction Co. have authorized an issue of \$150,000 of preferred stock to pay off its debt and extend the interurban line to Pelzer. R. E. Ligon is president.

Athens, Ga.—The Athens Electric Railway, it is reported, will do some double-tracking and will also build three blocks of new line.

Gainesville, Texas.—C. R. Ball of Oklahoma City, Okla., and E. S. Alnutt are reported to have ordered material for the proposed street railway in Gainesville, and work will begin in March.

Pensacola, Fla.—Reported that the East Pensacola City Company will begin construction about March 1 on its proposed street railway from Pensacola to East Pensacola, one and one-half miles; address, 231 Brent Building, Pensacola, Fla.

Port Arthur, Texas.—H. J. Meyers and H. J. Pierce, representing capitalists of Dayton, Ohio, are reported to contemplate building an electric railway in Port Arthur, and application for franchise will be made.

Rusk, Texas.—The Texas & New Orleans Railroad branch from Rusk to Goliad, Texas, eight miles, is reported nearly completed and will probably be finished by April 1.

San Antonio, Texas.—The San Antonio Traction Co., it is reported, contemplates building a four-mile extension to the stockyards and Palm Garden, a suburb.

Weatherford, Texas.—A street railway franchise is reported granted to J. T. Patterson and associates of Weatherford.

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The Manufacturers' Record has received during the week the following particulars as to machinery that is wanted.

Air Compressor.—Carrington-Gonella Stone Co., Sanford, N. C., wants prices on 10-horsepower air compressor.

Air Compressor.—Clarence Cosby, Richmond, Va., wants second-hand air compressor; capacity, 450 to 500 feet of free air per minute under pressure of 125 pounds.

Air Compressor.—A. V. Kaiser & Co., 739 Drexel Bldg., 5th and Chestnut Sts., Philadelphia, Pa., in market for second-hand air compressor; capacity 4000 to 5000 cubic feet of air at 40 to 60 pounds.

Automobile Manufacturing Supplies.—Southern Automobile Manufacturing Co., F. M. Ridley, Jr., president, Lagrange, Ga., wants prices on automobile manufacturing supplies, especially trucks, drays, railway handcars, etc.

Bags.—Rosslyn Supply Co., Rosslyn, Va., wants addresses of manufacturers of bags for Portland cement.

Bank Fixtures.—J. F. Barnes, Jackson, Miss., wants bank fixtures.

Boiler.—Belington Handle & Manufacturing Co., E. A. Barte, secretary, Belington, W. Va., wants prices on second-hand 25-horse-power boiler.

Boiler.—J. A. Mitchener, Franklinton, N. C., wants 30 to 40 horse-power boiler; new or second-hand.

Boiler.—See "Water System."

Boilers.—J. F. Donahoo Company, Birmingham, Ala., wants boilers.

Bottling Equipment and Supplies.—Robeson Soda Water Co., Lumberton, N. C., wants prices on bottles, corks, crates, cans and best extracts, filters, carbonators and other bottling machinery.

Bottling Supplies.—Ex-Cel-O Company, A. B. Henry, president, 20½ Commerce St., Montgomery, Ala., wants prices on bottle crowns, corrugated paper cartons and glass demijohns, 1, 2, 3 and 5 gallons capacity.

Bracket and Pin Machinery.—Morganton Handle Co. in market for machinery for making insulator pins and brackets; new or second-hand.

Bridge Construction.—M. C. West, County Supervisor, Camden, S. C., will open bids March 5 for construction of bridge across Watered River; two concrete abutments, one concrete pier and two spans of steel bridges, one 375 and one 130 feet; plans and specifications on file at office of Wilson, Sompayrac & Urquhart, consulting engineers, Columbia, S. C., or at office of County Supervisor, on deposit of \$25, which will be refunded when plans are returned.

Briquetting Machinery.—R. L. Martin, Ocalia, Fla., wants to correspond with manufacturers of machinery for compressing peat into briquettes.

Building Material.—Dr. E. C. Anderson, Hopkinsville, Ky., wants prices on all kinds of building materials.

Building Stone.—U. S. Engineer Office, 920 17th St. N. W., Washington, D. C. Sealed proposals for furnishing building stone in Potomac Park will be received until March 31; information furnished on application; Jay J. Morrow, Major, Engineers.

Candy-manufacturing Supplies.—Jones-Bolmar Candy Co., H. H. Jones, president, Gulfport, Miss., wants prices on chocolate candy coolers, candy boxes, labels and general confectioners' supplies.

Canning Machinery.—Ashby Purse, secretary Raymond Land Co., Raymond, Ga., wants to correspond with manufacturers of canning machinery.

Cars.—See "Automobile Manufacturing Supplies."

Cars.—J. F. Donahoo Company, Birmingham, Ala., wants logging, box, electric, interurban and coal cars.

Cement.—H. B. Austin, Florence, Ala., wants prices on Portland cement.

Chewing-gum Machinery.—Kimbrough Manufacturing Co., Mobile, Ala., wants second-hand chewing-gum machinery operated by power.

Compresses.—See "Briquetting Machinery."

Concrete Mixers.—J. F. Donahoo Company, Birmingham, Ala., wants concrete mixers.

Cotton Gin.—Cross Hill Oil Mill, Cross Hill, S. C., in market for six to eight stand gin with power, either steam or gasoline engine and steam boiler.

Cotton Machinery.—W. P. Williams, Spartanburg, S. C., wants prices and information on machinery for manufacturing absorbent cotton and cotton silence cloth.

Cotton Machinery.—H. G. Allen, 545 Watkins St., Augusta, Ga., wants to correspond with manufacturers of machinery for producing absorbent cotton.

Crane.—Pfannmueller Engineering Co., 1003 First National Bank Bldg., Chicago, Ill., wants electric-driven travelling crane; 50-foot span, 15 to 25-ton capacity, with 5-ton auxiliary; motors of alternating type, 60 cycle, 3-phase, 220 or 440 volt.

Crushers.—J. F. Donahoo Company, Birmingham, Ala., wants rock crushers.

Drills, etc.—Bids will be received at office of General Purchasing Officer, Isthmian Canal Commission, Washington, D. C. until March 22 for furnishing steam churn drills, sanitary fixtures, range boilers, repair parts for steam shovels, brake-shoe heads, steel, brass, etc. Blanks and general information relating to Circular No. 496 may be obtained at above office or offices of assistant purchasing agents, 24 State street, New York; Custom-house, New Orleans; 1086 North Point street, San Francisco, Cal.; also from U. S. Engineer offices in following cities: Seattle, Wash.; Los Angeles, Cal.; Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, St. Paul, Detroit, Milwaukee, Chicago, St. Louis, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City; Chamber of Commerce and Board of Trade, Tacoma, Wash.; F. C. Boggs, Captain, Corps of Engineers, U. S. A., General Purchasing Officer.

Electric Fixtures.—J. F. Barnes, Jackson, Miss., wants electric fixtures.

Electric-light Plant, etc.—City of Berlin, Md., Orlando Harrison, Mayor, will open proposals March 16 for construction of electric-light plant and water-works; Dodge & Day, engineers in charge, Washington Bldg., Philadelphia, Pa.

Electric Lighting.—Bids will be received until March 23 for furnishing Sumter, S. C., with one hook-and-ladder truck and all necessary equipment, including 150 feet of ladders in desired lengths; 35-gallon chemical tank; also price, with two 3-gallon and two 5-gallon extinguishers instead of tank; total weight, 3500 pounds; f. o. b. Sumter. Address C. M. Hurst, clerk and treasurer.

Electric Motors.—See "Crane."

Electric Motors.—Daily Drovers' Telegram, J. N. Neff, manager, Kansas City, Mo., wants prices on electric motors.

Electric Plant.—Lafayette Railroad, J. A. Kauffman, general manager, Lafayette, Ga., wants quotations on electric plant; 200 to 300 lights.

Electric Wiring and Fixtures.—Bids will be received at office of H. L. Pettus, Constructing Quartermaster, Washington, Takoma Substation, D. C., until March 31 for electric wiring, electric-lighting fixtures, plumbing and heating of several buildings to be erected at Walter Reed Army General Hospital. (See "Government and State Buildings.")

Electrical Equipment.—J. C. Madden, Sr., Fort Worth, Texas, wants electric generators, arc lights and fans.

Electrical Equipment.—C. S. Lucas, Washington, Ga., wants to correspond with manufacturers of machinery for hydro-electric plant.

Electrical Supplies.—W. E. Davis, 2316 Prospect Ave., Kansas City, Mo., wants to correspond with manufacturers of electrical supplies.

Elevator.—Todd & Benson, 39 Broad St., Charleston, S. C., wants catalogues and prices on hand-power elevators for store building.

Elevator—Office Constructing Q. M., Fort Sam Houston, Texas.—Sealed proposals will be received until March 25, 1909, for construction, in post hospital at Fort Sam Houston, of electric invalid's elevator, with grill enclosures and gates, complete, and for electrical connections to street-car line. Information on application. Bidders to state names of manufacturers whose goods they propose to furnish. Address L. J. Fleming, Construction Q. M.

Elevators.—R. J. Reynolds, Winston-Salem, N. C., in market for combined passenger and freight elevator.

Engine.—Board of Fire and Water Commissioners, City Hall, Kansas City, Mo., will receive bids until March 11 for construction, delivery and erection of self-contained vertical triple-expansion crank and flywheel pumping engine, complete, upon proper foundation provided by city, in present building at Turkey Creek Pumping Station, Kansas City; pumping engine to have sufficient power and capacity to pump 15,000,000 U. S. gallons of water in 24 hours into pump mains at Turkey Creek station against combined lift of 350 feet for ordinary purposes and 410 feet for fire purposes, with steam pressure of 150 pounds per square inch at throttle valve; plans and general specifications on file in office of Water Department, Kansas City; bidders to state price in aggregate for doing all work mentioned; proposals to be made on blank form furnished by Board of Fire and Water Commissioners; each bid to be accompanied by plans and specifications sufficient in detail to distinctly describe and show pumping engine proposed to be used, etc.; cash or certified check for \$5000.

Engine.—San Angelo Water-Works Co., San Angelo, Texas, in market for cross-compound condensing Corliss engine direct connected to a 425-kilowatt alternating generator, with belt-driven exciter; speed, 100; steam 120, vacuum, 26 inches.

Engine.—Clarence Crosby, Richmond, Va., wants 50-horse-power engine, second hand.

Engines.—J. F. Donahoo Company, Birmingham, Ala., wants engines.

Engine.—Belington Handle & Manufacturing Co., E. A. Barte, secretary, Belington, W. Va., wants prices on second-hand 25-horse-power engine.

Fertilizer Machines.—Farmers' Cotton & Fertilizer Co., Hartwell, Ga., C. Linder, president, will open bids about June 1 for fertilizer-mixing machines.

Fiber Cans.—Jackson Coffee Co., Jackson, Miss., wants fiber cans for tea and coffee.

Fire Department.—Sealed bids will be received at office of J. A. McCampbell, City

Clerk, Anadarko, Okla., until March 15 for one combination chemical and hose wagon, 40 gallons capacity; 2000 feet of hose, with non-crossable screw coupling; two reducing nozzles (long); two underwriters' nozzles, one hose expander; one double adjustable harness; 450 feet shackle bars.

Fire Department Equipment.—Bids will be received until March 23 for furnishing Sumter, S. C., with one hook-and-ladder truck and all necessary equipment, including 150 feet of ladders in desired lengths; 35-gallon chemical tank; also price, with two 3-gallon and two 5-gallon extinguishers instead of tank; total weight, 3500 pounds; f. o. b. Sumter. Address C. M. Hurst, clerk and treasurer.

Fireproofing Materials.—See "Vault Materials."

Flour-Mill Machinery.—New Florence Mill & Elevator Co., A. H. Kallmeyer, president, New Florence, Mo., wants flour-mill equipment; 50 barrels capacity.

Gasfitting Materials.—See "Plumbing Materials."

Glass.—J. F. Barnes, Jackson, Miss., wants plate and wire glass.

Glass.—W. E. Brittman, pastor First Baptist Church, Mineral Wells, Texas, wants prices on glass.

Glass Machinery.—J. C. Madden, Sr., Fort Worth, Texas, wants glass-blowing and bottle-blowing machinery.

Glove Machinery.—G. W. Hubbard, Elberton, Ga., wants data and prices on machinery for manufacturing canvas gloves.

Grates.—See "Mantels, etc."

Grading.—Sealed proposals will be received until April 5 for grading West Point public road between Lafayette and Lanett, Ala.; specifications may be obtained and plans examined at office of A. J. Driver, Jr., Judge of Probate, Lafayette, Ala.

Handle Machinery.—Belington Handle & Manufacturing Co., E. A. Barte, secretary, Belington, W. Va., wants prices on handle machinery.

Heating.—See "Electric Wiring and Fixtures."

Heating Plant.—W. E. Brittman, pastor First Baptist Church, Mineral Wells, Texas, wants prices on heating plant for \$25,000.

Heating Plant.—V. C. Parker, Waycross, Ga., wants prices on hot-air heating system for two-story residence.

Heating Plant.—Daily Drovers' Telegram, J. N. Neff, manager, Kansas City, Mo., will need hot-water heating plant.

Heating Plants.—Bids will be opened March 8 for installation of steam heating plant in school building at Athens, Tenn.; certified check for \$100, payable to J. B. Childress, treasurer Board of Education, Athens; blank forms on which proposals must be made and plans and specifications on file at offices of J. R. Nankivell, Athens, or of Adams & Alsup, architects, James Bldg., Chattanooga.

Heating Plants.—See "Plumbing Materials."

Hoisting Engine.—Clarence Crosby, Richmond, Va., wants 30-horse-power double-drum engine, for cableway; second hand.

Hoisting Engines.—J. F. Donahoo Company, Birmingham, Ala., wants hoisting engines.

Hose.—Baltimore (Md.) Board of Awards will receive bids until March 10 for furnishing Fire Commissioners with 20,000 feet knitted double-jacket cotton, rubber-lined fire hose, 2½ inches internal diameter, fitted with Baltimore standard couplings, Higbee thread, each 50-foot section to weigh, with couplings, not less than 60 pounds. Specifications furnished upon application to P. W. Wilkinson, Secretary of Fire Department; certified check \$500.

Hospital Supplies.—H. E. Bonitz, Wilmington, N. C., wants catalogues of hospital supplies.

Ice Machinery.—W. J. Barrin, Tampa, Fla., wants estimates on 15 or 20 ton ice plant.

Ice-plant Supplies.—Huntington Ice & Cold, Storage Co., Huntington, Ark., wants gravity brine tank coils and ice hoist.

Locomotives.—J. F. Donahoo Company, Birmingham, Ala., wants locomotives.

Log Loaders.—J. F. Donahoo Company, Birmingham, Ala., wants log loaders.

Lumber.—Athens Planing Mill, Athens, Tenn., wants prices on yellow-pine framing, up to 40 feet long.

Lumber.—George P. Bewley, Berwyn, Md., wants market prices on gum framing and wheelwright lumber delivered into Baltimore, Philadelphia and New York.

Machine Tools.—Chas. T. Lehman, 1923 Powell avenue, Birmingham, Ala., wants 24-inch shaper; 15 or 20 inch lathe with bed

about 12 feet long; 24 or 26 inch lathe with bed 16 or 18 feet long; 30 or 36 inch lathe with bed 18 or 20 feet long; upright drill press, 20-inch; upright drill press, 26 or 28 inch.

Mantels, etc.—American Tile & Cement Co., Monument and Alsquith Sts., Baltimore, Md., in market for cabinet mantels and turplane mantel grates.

Mill Supplies.—T. Herbert Taylor, 419 Empire Bldg., Atlanta, Ga., wants to correspond with manufacturers of mill supplies.

Oil Mill.—George L. Wilson, Hondo, Texas, wants prices on complete outfit for 40-ton cotton-oil mill f. o. b. cars Hondo.

Overalls Manufacturing.—G. W. Hubbard, Elberton, Ga., wants data and prices on machinery for manufacturing overalls.

Paving.—Baltimore (Md.) Board of Awards, care of J. Sewell Thomas, City Register, City Hall, will receive bids until March 10 to grade, curb, gutter and pave with improved paving Remington and First avenues, from 29th street to Cedar avenue, and 30th street, from Huntington to Remington avenue; James H. Smith, president Commissioners for Opening Streets; Eugene F. Rodgers, secretary.

Pier Construction.—Baltimore (Md.) Board of Awards will receive bids until March 10 for repair of west end of Center Pier, Back Basin, and west bulkhead of Block street, together with construction of small pile and timber pier; certified check \$50; plans and specifications at office of Harbor Board, City Hall; Oscar F. Lackey, Harbor Engineer.

Pipe Organ.—W. E. Brittman, pastor First Baptist Church, Mineral Wells, Texas, wants pipe organ.

Piping.—J. W. Maxey Company, Binz Bldg., Houston, Texas, will want piping; 19,000 feet of eight-inch, 2300 feet of six-inch and 5000 feet of four-inch; also hydrants and valves.

Planing Machinery.—E. A. Laughlin, Port Arthur, Texas, wants prices on planing machinery.

Plumbing.—See "Electric Wiring and Fixtures."

Plumbing Materials.—Clarke & Westbrook, 409 N. 18th St., Birmingham, Ala., in market for plumbing, heating and gas-fitting materials.

Power Plant.—Cross Hill Oil Mill, Cross Hill, S. C., in market for steam or gasoline engine and steam boiler.

Printed Forms.—J. A. Kauffman, Lafayette, Ga., wants samples and prices of printed forms and books for railroad work.

Printing Plant.—Independent Publishing Co., W. W. Green, president, Emporia, Va., will open bids April 1 for printing plant equipment.

Pulpit Furnishings.—W. E. Brittman, pastor First Baptist Church, Mineral Wells, Texas, wants prices on pulpit furnishings.

Pump Manufacturing.—J. L. O. King, Seneca, S. C., wants to correspond with pump manufacturers relative to introduction of water elevator for wells.

Pumps.—See "Water System."

Rails.—W. L. Clement Lumber Co., Greensboro, N. C., wants prices on 60 tons of 35-pound new or first-class relaying steel rail delivered at Cheraw, S. C., for prompt shipment.

Rails, etc.—Lafayette Railroad, J. A. Kauffman, general manager, Lafayette, Ga., wants 375 tons 60-pound and 90 tons 55-pound steel rails, with angle bars, bolts and spikes.

Railway Equipment.—Marshall & East Texas Railway, A. T. Perkins, president, St. Louis, Mo., will probably buy additional railway equipment.

Railway Equipment, etc.—Oklahoma & Golden City Railroad, John A. Griesel, general manager, Golden City, Mo., will award contracts about June 1 for railway equipment and supplies; standard gauge; 270-mile main line; 70-mile branch line.

Railway Supplies.—T. Herbert Taylor, 419 Empire Bldg., Atlanta, Ga., wants to correspond with manufacturers of railway supplies.

Riprap Stone.—U. S. Engineer's Office, 920 17th St. N. W., Washington, D. C. Sealed proposals for furnishing and placing riprap stone on sea wall, Anacostia River, D. C., will be received until March 31. Information furnished on application; Jay J. Morrow, Engineers.

Road Construction.—Bids will be opened next month for construction of Rockfish road, from Basic City, Va., over Blue Ridge Mountains to Brookville, Va.; maps, surveys, etc., on file in office of H. M. Magie, secretary Augusta, Nelson and Albemarle Counties Co-operative Road Improvement Association, First National Bank Bldg., Waynesboro, Va. (See "Road and Street Improvements.")

Rubbing Machinery.—Carrington-Gonella Stone Co., Sanford, N. C., wants prices on rubbing machinery for sandstone.

Sawmills.—Planters' Industrial Institute, James Chambers Wilson, president, Delhi, La., wants portable sawmill to work 1600 acres of timber; also lath and shingle machine.

Sawmills.—J. F. Donahoo Company, Birmingham, Ala., wants sawmills.

Seating Equipment.—W. E. Brittman, pastor First Baptist Church, Mineral Wells, Texas, wants prices on pews.

Seating.—See "Theater Equipment."

Seating.—Westminster School District No. 17, Westminster, S. C., W. P. Anderson, clerk of the board, wants prices on 800 opera seats.

Sewer Construction.—Commissioners of Sewerage (W. C. Nones, chairman, and Charles P. Weaver, secretary-treasurer), Equitable Bldg., Louisville, Ky., will receive bids until March 12 for construction of Cave Hill lateral sewers, contract No. 27, and until March 19 for construction of section "A" of Middle Fork trunk sewer, contract No. 28, of comprehensive system of sewerage; former work will consist mainly of building about 4500 feet of separate sewers of sizes 8 to 30 inches in diameter, about 9 feet deep, and including 100 cubic yards of concrete; latter work will consist mainly of building concrete sewer about 3500 feet long, sizes 74 and 39 inches in diameter, and including about 800 cubic yards of concrete; about 1600 feet of this sewer will be in tunnel partly in rock. Plans and specifications for former on file at office of Commissioners, and for latter at office of Commissioners and of Harrison P. Eddy, consulting engineer, 14 Beacon St., Boston, Mass.; each bid to be accompanied by certified check for 7 per cent. of amount. J. B. F. Breed, chief engineer.

Sewing Machines.—See "Overalls Machinery" and "Glove Machinery."

Shafting.—Basic Furniture Co., W. F. Dull, superintendent, Basic City, Va., needs countershaft.

Shoes.—J. P. Long, Thomasville, N. C., wants to correspond with shoe manufacturers.

Steam Shovels.—J. F. Donahoo Company, Birmingham, Ala., wants steam shovels.

Steel Rails.—J. F. Donahoo Company, Birmingham, Ala., wants steel rails.

Sewing Machines.—See "Overalls Machinery" and "Glove Machinery."

Shafting.—Basic Furniture Co., W. F. Dull, superintendent, Basic City, Va., needs countershaft.

Shoes.—J. P. Long, Thomasville, N. C., wants to correspond with shoe manufacturers.

Steam Shovels.—J. F. Donahoo Company, Birmingham, Ala., wants steam shovels.

Steel Rails.—J. F. Donahoo Company, Birmingham, Ala., wants steel rails.

Sewing Machines.—See "Overalls Machinery" and "Glove Machinery."

Shafting.—Basic Furniture Co., W. F. Dull, superintendent, Basic City, Va., needs countershaft.

Shoes.—J. P. Long, Thomasville, N. C., wants to correspond with shoe manufacturers.

Steam Shovels.—J. F. Donahoo Company, Birmingham, Ala., wants steam shovels.

Steel Rails.—J. F. Donahoo Company, Birmingham, Ala., wants steel rails.

Sewing Machines.—See "Overalls Machinery" and "Glove Machinery."

Shafting.—Basic Furniture Co., W. F. Dull, superintendent, Basic City, Va., needs countershaft.

Shoes.—J. P. Long, Thomasville, N. C., wants to correspond with shoe manufacturers.

Steam Shovels.—J. F. Donahoo Company, Birmingham, Ala., wants steam shovels.

Steel Rails.—J. F. Donahoo Company, Birmingham, Ala., wants steel rails.

Sewing Machines.—See "Overalls Machinery" and "Glove Machinery."

Shafting.—Basic Furniture Co., W. F. Dull, superintendent, Basic City, Va., needs countershaft.

Shoes.—J. P. Long, Thomasville, N. C., wants to correspond with shoe manufacturers.

Steam Shovels.—J. F. Donahoo Company, Birmingham, Ala., wants steam shovels.

Steel Rails.—J. F. Donahoo Company, Birmingham, Ala., wants steel rails.

Sewing Machines.—See "Overalls Machinery" and "Glove Machinery."

Shafting.—Basic Furniture Co., W. F. Dull, superintendent, Basic City, Va., needs countershaft.

Shoes.—J. P. Long, Thomasville, N. C., wants to correspond with shoe manufacturers.

Steam Shovels.—J. F. Donahoo Company, Birmingham, Ala., wants steam shovels.

Steel Rails.—J. F. Donahoo Company, Birmingham, Ala., wants steel rails.

Sewing Machines.—See "Overalls Machinery" and "Glove Machinery."

Shafting.—Basic Furniture Co., W. F. Dull, superintendent, Basic City, Va., needs countershaft.

Shoes.—J. P. Long, Thomasville, N. C., wants to correspond with shoe manufacturers.

Steam Shovels.—J. F. Donahoo Company, Birmingham, Ala., wants steam shovels.

Steel Rails.—J. F. Donahoo Company, Birmingham, Ala., wants steel rails.

Sewing Machines.—See "Overalls Machinery" and "Glove Machinery."

Shafting.—Basic Furniture Co., W. F. Dull, superintendent, Basic City, Va., needs countershaft.

Shoes.—J. P. Long, Thomasville, N. C., wants to correspond with shoe manufacturers.

Steam Shovels.—J. F. Donahoo Company, Birmingham, Ala., wants steam shovels.

Steel Rails.—J. F. Donahoo Company, Birmingham, Ala., wants steel rails.

Sewing Machines.—See "Overalls Machinery" and "Glove Machinery."

Shafting.—Basic Furniture Co., W. F. Dull, superintendent, Basic City, Va., needs countershaft.

Shoes.—J. P. Long, Thomasville, N. C., wants to correspond with shoe manufacturers.

Steam Shovels.—J. F. Donahoo Company, Birmingham, Ala., wants steam shovels.

Steel Rails.—J. F. Donahoo Company, Birmingham, Ala., wants steel rails.

Sewing Machines.—See "Overalls Machinery" and "Glove Machinery."

Shafting.—Basic Furniture Co., W. F. Dull, superintendent, Basic City, Va., needs countershaft.

Shoes.—J. P. Long, Thomasville, N. C., wants to correspond with shoe manufacturers.

Steam Shovels.—J. F. Donahoo Company, Birmingham, Ala., wants steam shovels.

Steel Rails.—J. F. Donahoo Company, Birmingham, Ala., wants steel rails.

Sewing Machines.—See "Overalls Machinery" and "Glove Machinery."

Shafting.—Basic Furniture Co., W. F. Dull, superintendent, Basic City, Va., needs countershaft.

Shoes.—J. P. Long, Thomasville, N. C., wants to correspond with shoe manufacturers.

Steam Shovels.—J. F. Donahoo Company, Birmingham, Ala., wants steam shovels.

Steel Rails.—J. F. Donahoo Company, Birmingham, Ala., wants steel rails.

Sewing Machines.—See "Overalls Machinery" and "Glove Machinery."

Shafting.—Basic Furniture Co., W. F. Dull, superintendent, Basic City, Va., needs countershaft.

Shoes.—J. P. Long, Thomasville, N. C., wants to correspond with shoe manufacturers.

Steam Shovels.—J. F. Donahoo Company, Birmingham, Ala., wants steam shovels.

Steel Rails.—J. F. Donahoo Company, Birmingham, Ala., wants steel rails.

Sewing Machines.—See "Overalls Machinery" and "Glove Machinery."

Shafting.—Basic Furniture Co., W. F. Dull, superintendent, Basic City, Va., needs countershaft.

Shoes.—J. P. Long, Thomasville, N. C., wants to correspond with shoe manufacturers.

Steam Shovels.—J. F. Donahoo Company, Birmingham, Ala., wants steam shovels.

Steel Rails.—J. F. Donahoo Company, Birmingham, Ala., wants steel rails.

Sewing Machines.—See "Overalls Machinery" and "Glove Machinery."

Shafting.—Basic Furniture Co., W. F. Dull, superintendent, Basic City, Va., needs countershaft.

Shoes.—J. P. Long, Thomasville, N. C., wants to correspond with shoe manufacturers.

Steam Shovels.—J. F. Donahoo Company, Birmingham, Ala., wants steam shovels.

Steel Rails.—J. F. Donahoo Company, Birmingham, Ala., wants steel rails.

Sewing Machines.—See "Overalls Machinery" and "Glove Machinery."

Shafting.—Basic Furniture Co., W. F. Dull, superintendent, Basic City, Va., needs countershaft.

Shoes.—J. P. Long, Thomasville, N. C., wants to correspond with shoe manufacturers.

Steam Shovels.—J. F. Donahoo Company, Birmingham, Ala., wants steam shovels.

Steel Rails.—J. F. Donahoo Company, Birmingham, Ala., wants steel rails.

Sewing Machines.—See "Overalls Machinery" and "Glove Machinery."

Shafting.—Basic Furniture Co., W. F. Dull, superintendent, Basic City, Va., needs countershaft.

Shoes.—J. P. Long, Thomasville, N. C., wants to correspond with shoe manufacturers.

Steam Shovels.—J. F. Donahoo Company, Birmingham, Ala., wants steam shovels.

Steel Rails.—J. F. Donahoo Company, Birmingham, Ala., wants steel rails.

Sewing Machines.—See "Overalls Machinery" and "Glove Machinery."

Shafting.—Basic Furniture Co., W. F. Dull, superintendent, Basic City, Va., needs countershaft.

Shoes.—J. P. Long, Thomasville, N. C., wants to correspond with shoe manufacturers.

Steam Shovels.—J. F. Donahoo Company, Birmingham, Ala., wants steam shovels.

Steel Rails.—J. F. Donahoo Company, Birmingham, Ala., wants steel rails.

Sewing Machines.—See "Overalls Machinery" and "Glove Machinery."

Shafting.—Basic Furniture Co., W. F. Dull, superintendent, Basic City, Va., needs countershaft.

Shoes.—J. P. Long, Thomasville, N. C., wants to correspond with shoe manufacturers.

Steam Shovels.—J. F. Donahoo Company, Birmingham, Ala., wants steam shovels.

Steel Rails.—J. F. Donahoo Company, Birmingham, Ala., wants steel rails.

Sewing Machines.—See "Overalls Machinery" and "Glove Machinery."

Shafting.—Basic Furniture Co., W. F. Dull, superintendent, Basic City, Va., needs countershaft.

Shoes.—J. P. Long, Thomasville, N. C., wants to correspond with shoe manufacturers.

Steam Shovels.—J. F. Donahoo Company, Birmingham, Ala., wants steam shovels.

Steel Rails.—J. F. Donahoo Company, Birmingham, Ala., wants steel rails.

Sewing Machines.—See "Overalls Machinery" and "Glove Machinery."

Shafting.—Basic Furniture Co., W. F. Dull, superintendent, Basic City, Va., needs countershaft.

Shoes.—J. P. Long, Thomasville, N. C., wants to correspond with shoe manufacturers.

Steam Shovels.—J. F. Donahoo Company, Birmingham, Ala., wants steam shovels.

Steel Rails.—J. F. Donahoo Company, Birmingham, Ala., wants steel rails.

Sewing Machines.—See "Overalls Machinery" and "Glove Machinery."

Shafting.—Basic Furniture Co., W. F. Dull, superintendent, Basic City, Va., needs countershaft.

Shoes.—J. P. Long, Thomasville, N. C., wants to correspond with shoe manufacturers.

Steam Shovels.—J. F. Donahoo Company, Birmingham, Ala., wants steam shovels.

Steel Rails.—J. F. Donahoo Company, Birmingham, Ala., wants steel rails.

Sewing Machines.—See "Overalls Machinery" and "Glove Machinery."

Shafting.—Basic Furniture Co., W. F. Dull, superintendent, Basic City, Va., needs countershaft.

Shoes.—J. P. Long, Thomasville, N. C., wants to correspond with shoe manufacturers.

Steam Shovels.—J. F. Donahoo Company, Birmingham, Ala., wants steam shovels.

Steel Rails.—J. F. Donahoo Company, Birmingham, Ala., wants steel rails.

Sewing Machines.—See "Overalls Machinery" and "Glove Machinery."

Shafting.—Basic Furniture Co., W. F. Dull, superintendent, Basic City, Va., needs countershaft.

Shoes.—J. P. Long, Thomasville, N. C., wants to correspond with shoe manufacturers.

Steam Shovels.—J. F. Donahoo Company, Birmingham, Ala., wants steam shovels.

Steel Rails.—J. F. Donahoo Company, Birmingham, Ala., wants steel rails.

Sewing Machines.—See "Overalls Machinery" and "Glove Machinery."

Shafting.—Basic Furniture Co., W. F. Dull, superintendent, Basic City, Va., needs countershaft.

Shoes.—J. P. Long, Thomasville, N. C., wants to correspond with shoe manufacturers.

Steam Shovels.—J. F. Donahoo Company, Birmingham, Ala., wants steam shovels.

Steel Rails.—J. F. Donahoo Company, Birmingham, Ala., wants steel rails.

Sewing Machines.—See "Overalls Machinery" and "Glove Machinery."

Shafting.—Basic Furniture Co., W. F. Dull, superintendent, Basic City, Va., needs countershaft.

Shoes.—J. P. Long, Thomasville, N. C., wants to correspond with shoe manufacturers.

Steam Shovels.—J. F. Donahoo Company, Birmingham, Ala., wants steam shovels.

Steel Rails.—J. F. Donahoo Company, Birmingham, Ala., wants steel rails.

Sewing Machines.—See "Overalls Machinery" and "Glove Machinery."

Shafting.—Basic Furniture Co., W. F. Dull, superintendent, Basic City, Va., needs countershaft.

Sh

dend of 8 per cent. on its \$15,000,000 capitalization.

Edwin H. Cheney Appointed.

Announcement is made of the appointment of Edwin H. Cheney as manager of the Chicago district of the Wagner Electric Manufacturing Co. of St. Louis, with headquarters in the Marquette Building, Chicago. Since his graduation in the Electrical Engineering Course of the University of Michigan in 1892, Mr. Cheney has been located in Chicago. After graduation he went with the Chicago Edison Company as chief draftsman, and was subsequently connected with the construction department until 1899. Then he left to become treasurer and manager of the Mutual Electric Co. of Chicago, resigning in 1901 to become secretary and treasurer of the Illinois Maintenance Co. This position he held for five years, discontinuing to become president of the Fuel Engineering Co., from which he resigned to accept the Wagner appointment.

Installing DuBois Machinery.

The DuBois (Pa.) Iron Works has a contract for the pumping station for the Clarion water-works, the machinery consisting of one 150-horse-power DuBois tandem natural gas engine geared to a 1,000,000-gallon pump, one 50-horse-power unit for driving air compressor, one centrifugal pump, together with all necessary fittings, etc. The plant is an auxiliary to the present steam pumping equipment, which will eventually be replaced by a duplicate of the new gas-engine-driven unit. The engines and pumps will work against a head of 65 feet, pumping through 400 feet of 10-inch main to the standpipe. The company also has contract for a 160-horse-power twin tandem gas engine, direct connected to 100-kilowatt generator, for the lighting plant of the Seventy-fourth Regiment State Armory Building at Buffalo, N. Y.

Recent Frick Machinery Sales.

The Frick Company, Waynesboro, Pa., reports the following recent sales of its machinery: E. A. Sammons Company, New Orleans, La., four-ton refrigerating compression side, two-ton freezing system, two-ton distilling system; Milan (Tenn.) Ice & Coal Co., 10-ton ice plant and brine piping for ice storage; Champion & Pascual, Havana, Cuba, six-ton ice plant for L. Refleer, San Juan y Martinez; Hygela Ice & Storage Co., Poughkeepsie, N. Y., 25-ton ice-making compression side; Golden State Canning Co., Ontario, Cal., 12-ton refrigerating machine and direct expansion piping for storage rooms; Norman (Okla.) Milling & Grain Co., 12-ton ice-making plant; Geo. B. Kimbro and associates, Lutcher, La., 20-ton ice plant and direct expansion piping for ice storage; N. A. Brown, C. W. Middleton, Max Greenspun, Clinton and T. H. Fraser, Hamlin, Texas, 20-ton ice plant; Chas. A. Kefauver, M.D., Stoutsville, Ohio, two-ton ice plant and brine piping for ice storage, and John Hague, four-ton refrigerating machine for R. Hartman Produce Co., St. Louis, Mo.

Acme Corrugated Metal Culverts.

Those who are interested in improved culverts are urged to investigate the features of the Acme corrugated metal culvert. This culvert is manufactured from "No-Co-Ro" metal (a special analysis material entirely different from steel and said to be superior in quality to charcoal, muck bar or any other iron), heavily galvanized by a special process, preventing corrosion. It is guaranteed to resist the elements of rust for 25 years. The metal is corrugated, and its "nestable" construction enables the manufacturer to ship to any part of the United States. It can readily be hauled across country; in setting up, the sections overlap each other; a hammer and a wrench are the only tools needed. The Acme culvert has unusual strength because of the heavy gauge of iron used, but the flange-joint construction along both sides of the cylinder and the break-joint reinforcement serve as still further strengtheners where the ordinary culvert is weakest. The sizes offered are from eight inches to six feet in diameter. The Canton Culvert Co., Canton, Ohio, is the manufacturer of the Acme culvert and has obtained for distribution some 60,000 folders describing and illustrating the Acme culvert and its merits. Requests for folder No. 106 are invited.

New Blast Heater Coil.

A new style of hot-blast heater coil, distinguished by a positive flow of steam, water of condensation and air in the natural direction due to gravity, and suitable for use with live and exhaust steam and with water for heating or cooling purposes, was recently placed on the market by the Green Fuel Economizer Co., Matteawan, N. Y. Among recent sales of this apparatus to

well-known companies were the following: Grand Rapids Refrigerating Co., Grand Rapids, Mich.; Bartlett, Kuhn & Co., Terre Haute, Ind.; I. E. Palmer Company, Middletown, Conn.; First Avenue Brick & Tile Co., Evansville, Ind.; Badger State Malt Co., Waterloo, Wis.; Waterbury Castings Co., Waterbury, Conn.; W. H. Conklin Company, Columbus, Ohio; P. Nacey Company, Chicago, Ill.; O. C. Davis Company, Racine, Wis.; Alabama State Normal School, Jacksonville, Ala.; Well & Elsenerth, Chicago, Ill.; Newbury Manufacturing Co., Monroe, N. Y.; Wallace Bros. Company, Lafayette, Ind.; M. & H. W. Nixon Paper Co., Manayunk, Pa.; Carnegie Steel Co., Waverly Warehouses, Waverly, N. J.; Wageraw Bleachery, Hawthorne, N. J.; Youngstown Sheet & Tube Co. (four orders), Youngstown, Ohio; Textile Finishing Co., New Durham, N. J., and others.

"Albany" Loose-Pulley Cup.

Messrs. Adam Cook's Sons, New York, have designed a special cast spindle grease cup for use on loose pulleys in connection with their Albany grease as a means to perfect lubrication. Referring to this combination, D. B. Cobb, chief engineer of the Glenwood Cotton Mills, Easley, S. C., writes: "We have here a clutch pulley that drives the dynamo. For the past four years it has burned out one set of sheaves every season, and it only runs about four hours per day, and at that we had to be continually on the watch. Now, I want you to understand I have been a user of Albany grease for a number of years, and do not think there is a better lubricant in the world for engines, line shaft, etc., but I have never had the satisfaction with the use of it that I have had since I got this cup. You see, the spring cup forces the grease through when it is not needed, and is wasted, but this one is absolutely automatic and lets the grease through just as it needs it and keeps the parts cool." The Albany loose-pulley cup is provided with a spindle which is in contact with shaft at all times. The centrifugal force is overcome, due to the Albany grease remaining at the same consistency, except that portion adjacent to the spindle, which, liquefying, is drawn to shaft by capillary attraction or otherwise under the influence of molecular attraction, lubricating the bushing of the pulley.

TRADE LITERATURE.

The Right Roof.

A book is being distributed to tell about the right roofing to use for durability, protection, appearance and other features. It is being mailed to interested parties by the Cortright Metal Roofing Co., 50 North 23d St., Philadelphia, Pa.

Fairbanks-Morse Spraying Outfits.

People who are interested in modern spraying equipment will find timely data and illustrations in the Fairbanks-Morse catalogue, No. 75. This publication tells about the spraying outfits manufactured by Fairbanks-Morse & Co. of New York, Chicago, Louisville, Ky., St. Louis, Kansas City, Cincinnati and other cities.

Interesting Concrete Sewer Work.

Those having to do with the construction of sewers will find information in a pamphlet being issued by the Lehigh Portland Cement Co., Cleveland, Ohio. This describes in detail the College avenue sewer constructed in Indianapolis and in which the company's brand of cement was used. The work is illustrated and described in detail.

From Dean Bros.

Pony Catalogue, No. 76, has been issued by the Dean Bros. Steam Pump Works, Indianapolis, Ind. It presents brief descriptions and illustrations of Dean Bros.' fire, heavy service, compound vertical, mining, sinking, distillery and other pump manufactured by the company. Pump-users should investigate these equipments.

Kahn System Achievements.

In order that those contemplating the construction of any work may see the merits claimed for the Kahn system of concrete construction, the Trussed Concrete Steel Co., Detroit, Mich., has published a booklet, containing a partial list of the structures erected in all parts of this country and foreign countries in which Kahn system products have been used.

How to Spray.

How to spray, when to spray and what sprayers to use is told in an illustrated publication which the Goulds Manufacturing Co. is distributing. The book contains interesting information and photographic views of

the Goulds hand and power sprayers, pumps and other similar equipments. Address the company at its main offices, Seneca Falls, N. Y.

Bettendorf Axle Co.

An innovation in trade literature is the illustrated book now being distributed by the Bettendorf Axle Co. of Davenport, Iowa. The publication is entitled "Bettendorf Bears," and tells in rhyme about the Bettendorf bears and the shop in which Bettendorf trucks and axles are manufactured. There are several full-page colored illustrations.

Western Electric Literature.

Bulletin No. 5533 of the Western Electric Co. describes and illustrates series incandescent lighting system with tungsten lamps. This bulletin presents interesting data regarding another step forward in the field of street lighting, with especial reference to the system developed by the company. Address the company at Hawthorne, Chicago, Ill., or any of its branch offices.

Relating to Accounting Systems.

In "System, The Magazine of Business," for November appeared some pointed references to systems as used and not used in modern business establishments. Some of these statements have been reproduced in a booklet now being distributed by David A. Jayne, Charleston National Bank Bldg., Charleston, W. Va. He is consulting accountant and auditor, making a specialty of installing business systems.

Old Dominion Cement on the Virginian.

Bulletin No. 10, published by the Wm. G. Hartranft Cement Co., Real Estate Trust Bldg., Philadelphia, contains interesting illustrations of bridge, culvert and viaduct work on the Virginian Railway, in which Old Dominion Portland cement was used. This is one of the best constructed railroads in the South, and in all approximately 150,000 barrels of the brand of cement was used.

Westinghouse Electric Fans for 1909.

No argument is needed to promote the use of electric fans. These devices are used throughout the world, and their advantages during heated seasons are thoroughly appreciated. The Westinghouse Electric & Manufacturing Co., Pittsburgh, Pa., has for years been meeting the demand for electric fans of all kinds and for all places. It is now distributing its illustrated catalogue describing the Westinghouse fan motors for 1909.

Peerless Air Compressors and Vacuum Pumps.

A 16-page bulletin, illustrating and describing a few of the many types and styles of Peerless air compressors and vacuum pumps, has been issued by the American Compressor & Pump Co. This company has equipped new shops at 718 E. Pratt St., Baltimore, Md. The compressors are of the highest grade, and all parts are interchangeable. The general sales office is at 26 Cortlandt St., New York.

The Vixen Milling Tool.

People who have need for files will find timely information in the National File & Tool Co.'s new booklet, which tells about the Vixen milling tool. This is an improvement of the files heretofore offered to tool users. It is of especial value to engineers and mechanics or others engaged in the working of metals. The booklet describes and illustrates the Vixen patent milling tool. Address the company at 205 The Bourse, Philadelphia.

Tungsten Multiple Lamps.

Bulletin No. 6D of the Engineering Department of the National Electric Lamp Association supersedes Bulletins Nos. 6 and 6B, and presents the latest information regarding Tungsten multiple lamps. These are lamps of 100 to 125 volts, 25 and 40 watt, standard short Edison bases, with small bulbs, and 40, 60 and 100 watt-skirted (insulated) Edison bases with large bulbs. Address the association at 4411 Hough avenue, Cleveland, Ohio.

Interesting Electric Generator Sales.

A list of engine-type direct-current generators sold by the Crocker-Wheeler Co., Amherst, N. J., is given in Bulletin No. 110. This list, covering 15 pages, gives the names and addresses of companies and individuals using these generators. Industrial plants, street railways, railroad and other machine shops, office buildings, stores, schools and residences are included in the list. In several items no address is given, these being United States battleships, several of which are equipped with Crocker-Wheeler generators.

Eclipse Concrete Mixer.

To gain success in concrete work, nothing is more important than the proper mixing of the materials. This was formerly done by hand, but it is now recognized that machine mixing is more accurate and thorough. For the purpose of thoroughly acquainting cement users with its various advantages, the Standard Scale & Supply Co., 50-52 Canal St., Chicago, Ill., has published a folder illustrating and describing its "Eclipse" concrete mixer. The various features of the machine are described and opinions as to its efficiency by a number of users are also given.

New Idea Feed-Water Regulators.

Engineers will be interested in a current booklet which tells details of a water-level regulator manufactured by the "S-C" Regulator Co. of Foster, Ohio. The "S-C" regulator protects boilers by keeping the water always at the same level, creating a larger steam reservoir, thus furnishing dry steam, which gives steady power, doing more and better work, while it saves fuel. The booklet mentioned presents photographic views to assist in elucidating the explanations, which refer to the absence of floats, expansion tubes, needle valves, exhaust, scale and corrosion in the regulator.

Directory of Portland Cement Manufacturers.

The 1909 edition of the Directory of Portland Cement Manufacturers is ready for distribution. It is the third annual edition, in vest-pocket size and bound in leather. Detailed information is given of each company, including names and addresses of officers, capitalization, brand, daily capacity, number of kilns, method of process and kind of fuel used; also, an alphabetical list of officers, with their connections and addresses, and a list of brands. A new feature in this edition is a list of gypsum and lime companies, including detailed information concerning them. This directory is published by the Cement Era, Monadnock Block, Chicago.

American Railway Supply Co.

The latest improved devices in American railway supplies are illustrated and described in a pamphlet issued by the American Railway Supply Co., manufacturer, 21 Park Pl., New York. These devices include baggage checks, number plates, hotel checks, tokens, pay checks, medals, breast badges, buttons, cap badges, and all sorts of stamped and embossed metal work and railway supplies needed by modern electrical and steam railways. Managers who want to be fully informed regarding the improvements in the articles named are invited to write for the catalogue.

Ingersoll-Rand Compressed Air Machinery.

Managers of plants using compressed-air machinery in any form will be interested in new pamphlets which the Ingersoll-Rand Co., 11 Broadway, New York City, has recently issued. These include descriptions and illustrations of the "Imperial Type X" duplex steam-driven compressors, air receivers, pressure tanks and moisture traps, and Sargent rock drills. Of equal interest are the company's publications on rock-excavating machinery, pneumatic pumping systems, compressors, electric air rock drills and chiselers, small power-driven air compressors and steam-driven straight line two-stage air compressors.

The Hotel Patten, Chattanooga.

Some of the best hotels of the entire country are located in the South. They include large and costly structures built during recent years to meet the demand for improved facilities for the traveler. At Chattanooga, Tenn., is located the Hotel Patten, a fire-proof building, with every room outside and every modern convenience which comfort, convenience and health demand. A booklet describing the Hotel Patten has been published, and it contains also many interesting facts relative to the city of Chattanooga, one of the most progressive and industrially active municipalities in the Southern States. Address the manager of the hotel for a copy of the booklet.

Blake & Knowles Power Pumps.

Illustrations and descriptions of a new line of Blake & Knowles power pumps are contained in a series of bulletins recently issued by the International Steam Pump Co., 115 Broadway, New York. These include bulletins No. BK-825, covering vertical triplex power pumps, single acting; BK-826, vertical triplex power pumps, double acting piston pattern; BK-827, deep-well pumps for artesian and curb wells, and BK-828, ammonia

[Continued on Page 87.]

THE PENNSYLVANIA RAILROAD COMPANY.

General Office, Broad Street Station.

PHILADELPHIA, 2d March, 1909.

The Board of Directors submit herewith to the Stockholders of the Pennsylvania Railroad Company a synopsis of their Annual Report for the year 1908:

The gross earnings of all lines directly operated were..... \$136,296,871 03

Operating expenses, excluding taxes..... \$97,412,015 71

Taxes on Pennsylvania Railroad and leased lines..... 3,988,977 19

Operating expenses, including taxes..... 101,400,992 90

Net earnings from operation..... \$34,895,878 13

Deduct rentals paid roads operated on basis of net earnings..... 2,706,685 38

Net operating earnings of The Pennsylvania Railroad Company..... \$32,189,192 75

To which add:

Interest from investments..... \$11,501,346 88

Hire of equipment, Interest General Account and other items..... 2,887,355 40

Gross Income..... \$46,577,895 03

Deduct:

Fixed rentals of leased roads..... \$3,730,672 04

Interest on bonded debt..... 12,629,296 31

Interest on mortgages and ground rents, interest on car trusts, etc. 2,019,266 04

Dividends aggregating 6 per cent..... \$28,207,690 64

From this amount the following deductions have been made:

Payments account Sinking and Trust Funds..... \$334,601 33

Portion of Car Trust Principal..... 3,799,266 56

Extraordinary expenditures:

Amount expended in revision of grades and alignment, and for additional tracks, etc..... 3,538,980 92

Amount applied towards construction of New York Tunnel Extension..... 1,000,000 00

Dividends aggregating 6 per cent..... \$8,672,848 81

Dividends aggregating 6 per cent..... \$19,534,811 83

Dividends aggregating 6 per cent..... 18,875,680 50

Dividends aggregating 6 per cent..... \$659,131 33

Dividends aggregating 6 per cent..... \$24,725,484 36

Dividends aggregating 6 per cent..... 1,129,815 62

Dividends aggregating 6 per cent..... 23,595,668 74

Amount to credit of Profit and Loss December 31, 1908..... \$24,254,890 07

GENERAL BALANCE SHEET (CONDENSED), DECEMBER 31, 1908.

Assets.	Liabilities.
Road, equipment and real estate..... \$299,556,687 56	Capital stock..... \$314,604,200 00
*Securities owned..... 234,907,752 61	Funded debt of The Pennsylvania R. R. Co..... 265,899,610 00
Leasehold interest in Harrisburg, Portsmouth, Mt. Joy & Lancaster Railroad..... 1,882,550 00	Funded debt of companies whose properties have been acquired by The Pennsylvania R. R. Co. 34,834,500 00
Accounts receivable:	Guaranteed Stock Trust Certificates, New York, Philadelphia & Norfolk R. R. and Philadelphia, Wilmington & Baltimore R. R. Co.'s..... 14,916,250 00
Sale Norfolk & Western stocks, etc..... 15,492,685 00	Mortgages and Ground Rents payable..... 2,924,535 13
Securities received with the lease of the U. N. J. R. R. & C. Co. 3,283,460 25	Guaranteed stock and bonds of the Harrisburg, Portsmouth, Mt. Joy & Lancaster R. R. C. 1,882,550 00
Loans for construction and real estate purposes to various controlled companies..... 12,403,833 77	Securities received with the lease of the U. N. J. R. R. & C. 3,283,460 25
New York Tunnel Extension..... 46,528,664 42	Car Trust Principal and Taxes charged out and awaiting settlement..... 4,774,908 68
Current Assets:	Current Liabilities:
Due from controlled companies for advances for construction and other purposes..... \$3,159,784 10	Pay-rolls and vouchers..... \$14,297,369 02
Due from individuals and companies..... 5,605,103 20	Due controlled companies other than traffic balances..... 5,782,213 29
Due from agents..... 5,291,856 56	Due Saving, Relief and Insurance Funds, etc..... 1,276,889 45
Bills receivable and miscellaneous assets..... 3,397,120 66	Interest accrued, matured and uncollected..... 3,231,247 89
Materials..... 10,449,482 67	Miscellaneous liabilities..... 4,211,496 01
Cash..... 56,025,897 82	Total..... 28,729,215 66
Sinking Funds, Trust Fund and Insurance Fund..... 8,158,208 18	Sinking Funds and Trust Fund..... 10,339,057 01
Total..... \$706,443,086 80	Profit and loss..... 24,254,890 07
	Total..... \$706,443,086 80

*\$11,250,000 par value P. B. & W. R. R. Co. stock is pledged for the payment of the outstanding stock trust certificates issued by Pennsylvania Company for Insurances on Lives and Granting Annuities, and \$2,492,750 par value N. Y., P. & N. R. R. Co. stock is pledged for the payment of the outstanding stock trust certificates issued by Fidelity Trust Company.

FUNDED DEBT.

There was an increase of \$39,372,000 in the amount of Consolidated Mortgage Bonds outstanding due to the issue of \$39,400,000 of those securities, less \$28,000 of

those maturing 1st May, 1943, which were retired under the Sinking Fund provisions of the mortgage. On your Balance Sheet are also carried \$7,478,250 of Trust Certificates, guaranteed by your Company in connection with the purchase of the stock of the New York, Philadelphia & Norfolk Railroad Company, and also the bonded debt of the Bald Eagle Valley and Junction Railroads, which have been absorbed.

Eight hundred and forty-one thousand dollars of the bonds issued under the General Mortgage of the United Railroad and Canal Companies of New Jersey, and forming a part of the \$20,000,000 secured thereby, having matured 1st September, 1908, were paid off and an equal amount of 4 per cent. bonds of that date, running for 40 years, was issued in lieu thereof under the provisions of the mortgage.

SECURITIES OF OTHER CORPORATIONS.

The cost of the securities of other corporations held by your Company 31st December, 1908, was \$232,094,793.95, and the direct revenue received therefrom during the year was \$11,287,743.88, being 4.86 per cent. upon the cost thereof. The increase in cost is due to the acquisition of the stock of the New York, Philadelphia & Norfolk Railroad Company, and to the securities received from the Pennsylvania Company on account of its contribution toward the cost of construction of the New York Tunnel Extension.

CAR TRUSTS.

The issue of Car Trust securities during the year consisted of \$182,000 of Series J of Pennsylvania General Freight Equipment Certificates of 1907, through which 147 steel underframe box cars were furnished for the Pennsylvania Railroad Company.

The outstanding Certificates of Series E, F and G of the Pennsylvania Rolling Stock Trust, having matured during the year, were paid and cancelled, and thereby 4946 cars became the property of your Company at a total cost of \$3,000,000.

The total number of Car Trust cars now in service, against which Car Trust certificates are outstanding, is 105,289, and the Car Trust certificates outstanding 31st December, 1908, aggregate \$61,900,000.

TRAFFIC.

The number of tons of freight moved on the five general divisions east of Pittsburgh and Erie in 1908 was 182,480,361, a decrease of 41,746,713, or 18.62 per cent.; the number of passengers was 61,380,533, a decrease of 5,976,300, or 8.87 per cent.

The other Railroad Companies east of Pittsburgh and Erie in which your Company is interested show satisfactory results. Detailed statements of their operations will be found in their respective annual reports, as well as in the full report of your Company.

LINES WEST OF PITTSBURGH—CAPITAL STOCK AND FUNDED DEBT.

The Pennsylvania Company acquired by purchase during the year a half-interest in the stock of the Lake Erie & Pittsburgh Railway Company, which is constructing a road between Youngstown and Lorain, Ohio.

In order to provide for the retirement at maturity, 1st August, 1908, of \$1,500,000 of Ashtabula & Pittsburgh Railway 6 per cent. bonds, and for construction expenditures and other corporate purposes, the Pittsburgh, Youngstown & Ashtabula Railway Company authorized the creation of a first general mortgage to secure a total issue of \$15,000,000 of bonds, of which a portion of Series A, amounting to \$2,000,000, was disposed of on satisfactory terms.

The Vandalia Railroad Company also authorized the sale of \$3,000,000 of its consolidated mortgage 4 per cent. bonds, Series B, and applied the proceeds thereof to the redemption of \$1,608,000 of the 7 per cent. bonds of the Indianapolis & Vincennes Railroad Company, one of its constituent companies, which matured 1st February, 1908, and toward construction and equipment expenditures and other capital requirements.

CAPITAL EXPENDITURES.

The amount of Capital Expenditures during the year on the Lines west of Pittsburgh for construction, equipment and real estate was \$4,980,616.35.

The main expenditures were upon additions to and improvements of motive power and equipment; the increase of yard, dock and other terminal facilities; the construction of second, third and fourth tracks upon the Cleveland & Pittsburgh and the Pittsburgh, Cincinnati, Chicago & St. Louis Railways, the elevation of tracks in Chicago and the purchase of additional real estate and right of way.

TRAFFIC.

The number of tons of freight moved on the Lines west of Pittsburgh was 104,035,740, a decrease of 51,864,686. The number of passengers carried was 30,291,763, a decrease of 2,709,630.

The gross earnings of all lines east and west of Pittsburgh for the year 1908 were \$274,338,803.82, operating expenses \$203,605,535.84 and net earnings \$70,733,267.98, a decrease in gross earnings, compared with 1907, of \$52,446,722.14, and a decrease in net earnings of \$7,436,297.58. There were 334,429,541 tons of freight moved on the entire system, being a decrease of 103,381,275 tons, and 142,676,779 passengers carried, a decrease of 10,885,192.

GENERAL REMARKS.

In pursuance of the authority conferred by the stockholders in March, 1907, an issue of \$39,400,000 of your Consolidated Mortgage Bonds was made on 1st May, 1908,

running for 40 years and bearing interest at 4 per cent. per annum, the issue being made in dollar and sterling bonds in substantially equal amounts.

When the negotiation of these bonds was first considered, the conditions which had forced upon the railways the issue of short-term obligations still prevailed to a very large extent. It was not to your advantage to meet capital requirements by the further issue of temporary obligations at high rates of interest; but it was found to be impracticable to sell the desired amount of bonds in this country, and it was not until English investors had agreed to take one-half of the issue that the sale could be consummated. It was not only gratifying to the management that the high credit of your Company enabled the securities to be disposed of at a more satisfactory interest rate, but this negotiation marked the return of a more normal market for railway obligations, and in that respect was of material service to your general interests.

An examination of the Balance Sheet will show that the cash in your treasury will in all probability be sufficient to meet the capital requirements of the current year. But it will be necessary to make timely provision for the \$60,000,000 of your short-term notes which mature 15th March, 1910, as well as for the \$20,000,000 of General Mortgage Bonds, which mature 1st July, 1910. The stockholders have already authorized the Board of Directors to increase your capital stock when in their judgment it may be advisable, and like authority will be asked as to the indebtedness, at the annual meeting, to the extent of \$80,000,000, in order that the Company may be in a position to meet its maturing obligations, through the issue, at the proper time, of either stock or bonds, or both, as may be to its best interests.

The industrial depression referred to in the last Annual Report continued throughout the entire year, and still prevails. Its results are clearly shown in the abnormal decrease both in your traffic and revenue. The volume of your freight tonnage decreased over 18 per cent., while your ton mileage and the gross earnings therefrom show a falling off of about 21 per cent. Your passenger traffic shows a reduction of about 10 per cent. in mileage and over 7 per cent. in revenue. This necessitated a drastic reduction in expenses in all departments and compelled the discharge of many thousands of your employes, and a material decrease in the hours of labor of many of those retained in the service.

It will be noted that the average rate received for the transportation of passengers was less than two cents per mile. There can be no question that the railways are not receiving a reasonable compensation for the service performed and for the comforts and facilities furnished to the traveling public in connection therewith or one sufficient to afford a fair return on the capital invested in this branch of their business.

It is gratifying to note that a more conservative spirit prevails in both the State and National Legislatures in regard to the undue regulation of railroads, and that the tendency is to defer further legislation until an opportunity has been afforded to ascertain the practical effect of the laws now in force. This would certainly appear to be wise in the interest of the general public, as those who in good faith invest in such enterprises and from whom the necessary capital must be obtained to enable the railroad companies to furnish the facilities required for the accommodation of the public cannot reasonably be expected to continue to make such investment unless they receive the same protection that is afforded the owners of other property.

After meeting all liabilities and paying dividends aggregating 6 per cent., and \$3,799,266.56 on account of the maturing principal of Car Trust Certificates, there was a surplus of \$5,198,112.25, of which \$3,538,980.92 were applied toward the Extraordinary Expenditures of the year, \$1,000,000 applied toward the cost of the New York Tunnel Extension, and \$659,131.33 credited to your Profit and Loss Account.

The extraordinary expenditure for the year was limited to such as was necessary to complete work already under way, and was substantially confined to the extension of the four-track system on your main line, purchases of right of way for your relief freight lines, the improvement of yards and terminal facilities at various points, the further elimination of grade crossings, and improvement of equipment.

The aggregate expenditures for construction, equipment and real estate on your main line between New York and Pittsburgh, including \$7,523,728.56 on account of the principal of Car Trusts and \$580,000 on account of the principal of Water Trust certificates, were \$15,337,159.11, of which \$5,648,365.27 was charged to Capital Account, \$7,338,247.48 against the Income of the year, \$224,402 against your Profit and Loss Account, and \$2,126,084.36 against the Extraordinary Expenditure Fund. In view of the unsatisfactory operating results of the Western New York & Pennsylvania Railway, and of the fact that its net earnings were not sufficient to meet the interest on its funded debt, \$365,469.79, the amount advanced to that Company, was also charged off against the Extraordinary Expenditure Fund.

The progress upon the Tunnel Extension into and through New York City has been very satisfactory. The work was actively prosecuted throughout the year, so that at present there is every reason to anticipate its completion during the summer of 1910.

On the section between the point of connection with your New Jersey Division, at Harrison, east of Newark (where the new transfer yard is being built, for interchange of traffic between this division and the tunnel extension), and the Hudson River, the embankments and bridges are constructed, with the exception of the drawbridge over

the Hackensack River, and the excavation and concrete lining of the Bergen Hill Tunnel are practically completed. Between the Weehawken Shaft, on the western bank of the Hudson, and Ninth avenue, New York, including the open western approach to the New York Station at Seventh avenue and Thirty-third street, the excavation is practically finished, and a large portion of the concrete lining is in place.

The steel structure of the station is almost completed, and over one-half of the exterior granite is in place, while substantial progress has been made in connection with the station facilities. The cross-town tunnels between the station and the East River, and those under the East River, are ready for the laying of the tracks.

The work in Long Island City, embracing the tunnels from the east side of the river to East and Borden avenues, is finished, and that east of East avenue, including the approaches to the Sunnyside yard, and the erection of the bridges over the same is well under way. The electrification of the Tunnel Line, and the tracklaying, signaling, interlocking and construction of the necessary yard and terminal facilities will be actively prosecuted during the current year, as well as the work on the New York Station.

In view of the fact that this important terminal is for the benefit of the entire Pennsylvania Railroad System, and that the lines West of Pittsburgh will reap a direct advantage therefrom, it has been deemed proper that the Pennsylvania Company should participate in the cost thereof. It has therefore contributed \$10,000,000 for that purpose and charged the same against its Profit and Loss Account.

By reference to the General Balance Sheet it will be seen that the total amount carried thereon on account of the New York Tunnel Extension is \$46,528,664.42. Of this amount, \$15,000,000 is represented by capital stock of the Pennsylvania Tunnel & Terminal Railroad Company, at par, and the balance represents the advances made on account of cost of construction to 31st December, 1908, after deducting the sums charged against the Income and Profit and Loss accounts of the Pennsylvania Railroad and Pennsylvania Companies, as stated in this and preceding annual reports.

In accordance with the authority conferred at the last meeting, the Bald Eagle Valley, Junction and Southwest Connecting Railways have been absorbed by and now form a part of the Pennsylvania Railroad.

The New York, Philadelphia & Norfolk Railroad, which forms the connecting link between your Philadelphia, Baltimore and Washington System, and the railways reaching Norfolk from the South and West, having (through the growth of Norfolk as a business center and as a gateway between the Northern and Southern Atlantic States) developed a large interchange traffic with your system, it was deemed advisable to acquire the ownership of its stock, especially as heavy expenditures had been made, on your part, to provide the necessary facilities therefor at terminal and other points on your lines. An agreement was therefore made for the purchase thereof through the issue of \$7,500,000 of 4 per cent stock trust certificates by the Fidelity Trust Company of Philadelphia, maturing 1st June 1948, the principal and interest of which were guaranteed by your Company. The net income of the property is sufficient, not only to take care of the obligations assumed in connection therewith, but to furnish funds for its further improvement.

The charges to CAPITAL ACCOUNT during the year were as follows:

COST OF ROAD:	Cost of Southwest Connecting Railway, absorbed.	\$25,000.00
	Cost of Junction Railroad, absorbed.....	975,000.00
	Cost of Bald Eagle Valley Railroad, absorbed.....	1,923,864.35
	Amount transferred from Real Estate account, being property used for railroad purposes.....	4,530,207.52
	Cost of additional General Offices transferred from other accounts.....	234,171.46
	Expenditure for Right of Way.....	\$2,242,279.93
	Less credit.....	13,070.00
		2,229,209.93
		\$9,917,453.26

EQUIPMENT:	Portion of payments on account of principal of Car Trust Certificates.....	\$3,500,000.00
		\$13,417,453.26

REAL ESTATE:	Credits thereto on account of transfer to Cost of Road, as above.....	\$4,530,207.52
	Sundry other credits.....	88,063.00
		\$4,618,270.52
	Less additional purchases.....	7,218.34

Total charged to Capital Account for 1908.....	\$8,806,401.08
--	----------------

The increase of CAPITAL STOCK during the year was as follows:

Issued in exchange for Convertible Bonds of 1902.....	\$8,800.00
In exchange for Convertible Bonds of 1906.....	750.00
Total issue during 1908.....	\$9,550.00

By order of the Board,

JAMES McCREA, President.

STOCKHOLDERS MAY OBTAIN PAMPHLET COPIES OF THE ANNUAL REPORT BY APPLYING TO OR ADDRESSING LEWIS NEILSON, SECRETARY, BROAD STREET STATION, PHILADELPHIA.

[Continued from Page 84.]

interesting feature of these pumps lies in the fact that the designs are entirely new, made to meet modern requirements, and embrace certain features which make them desirable for the highest efficiency when operated by motor, belt drive or other available power.

Zimmerman Steel Co.

An interesting publication is the annual catalogue of the Zimmerman Steel Co., main offices at Lone Tree, Iowa. It presents facts and figures, accompanied by illustrations relative to the company's products, which have an established reputation and are in increasing demand as their merits become better known to purchasers. This company manufactures solid steel stump pullers, the Royal pitless wagon scales, the Zimmerman pitless wagon scales, etc., besides building and erecting complete steel pints. Lumber men, contractors and others who have use for stump pullers, and all who need modern weighing equipments are invited to investigate the Zimmerman specialties. The company has branch offices throughout the United States and in various foreign countries.

The Otis Elevator Industry.

"The Indicator" is the title of a monthly publication devoted to the interests of the Otis elevator industry. Its design is to give to the coworkers of the Otis Elevator Co. a more comprehensive knowledge of the industry, to encourage individual effort and to unite in closer co-operation all those actively engaged in promoting the growth of the company. Each number of "The Indicator" contains interesting information and photographic views of prominent and costly bank and office buildings and other structures throughout the country in which Otis elevators have been installed. Among these structures may be noted the Hudson Terminal Building, New York; the Traders' Bank Building, Toronto, Canada; the Union Station, Washington; the Marshall Field stores, Chicago; the Singer Building, New York, and many others. The Otis Elevator Co. has its main offices at 17 Battery place, New York.

Peerless Cement Brick Machine.

The Peerless cement brick machine was invented after thorough investigation and the decision that a medium-priced machine with which one man could manufacture regular-sized brick from cement and sand would find a ready sale. This has been found true, and the Peerless invention is now in large and increasing demand throughout this country and in foreign countries. The machine will produce an average of 12,000 bricks in 10 hours and is equipped with a device that tamps all the bricks in the machine at one operation. Cement bricks have advantages that appeal to building contractors, architects and owners of the structures to be erected, and in almost any locality a demand can readily be developed. Interesting and timely information regarding the possibilities of the cement-brick industry and full details regarding the Peerless machine are presented in an illustrated book now being distributed by the Peerless Brick Machine Co. of Minneapolis, Minn.

Gilmer Belt Sander and Polisher.

Manufacturers using belt sanders and polishers will be interested in a pamphlet issued by the L. H. Gilmer Company, 504 Arch St., Philadelphia, Pa., describing the company's improved vertical machine. With this machine the operator always has his work on the proper level, squarely in front of him and resting on an adjustable table. There pumps, both power and steam driven. As being no weight to carry, the operator can devote his entire attention to the rapid and efficient production of the work. The machine, being of heavy construction and the pulleys carefully balanced, a belt speed of 4000 feet per minute may be maintained without heating the bearings or causing appreciable vibration. The action of the machine is always with the grain, thus avoiding cross-marks, which cause nearly as much trouble to remove as the original sanding. All kinds of flat surfaces or edges from the smallest piece that can be held in the fingers to a surface 18x24, can be handled by the machine, and its variety is limited only by the ingenuity of the operator.

Diversified Uses of Hy-Rib Metal.

Hy-Rib consists of a perfect steel lath surface stiffened by rigid high ribs. The ribs and the lath are manufactured from a single sheet of steel, making it a complete unit of laths and studs. No centering is required where Hy-Rib is used in concrete floors and roofs, as the ribs give sufficient strength and rigidity. In walls and partitions this material does away with studs. The lath surface

is straight and true, and the expansion is such as to provide a perfect clinch, with a minimum amount of plaster. Its use is found in every field of building operation—in construction work of all kinds, floors, roofs, walls, partitions, ceilings and furring. In curved shapes, bent in the company's shops before shipment and according to special designs, it is used for arched floors, culverts, conduits, sewers, silos, tanks, reservoirs and tunnels. This material is made by the Trussed Concrete Steel Co., Detroit, Mich., which has recently issued a booklet illustrating and describing the general applications.

DuBois Producers and Engines.

The 1909 catalogue of the DuBois Iron Works, DuBois, Pa., covering the company's gas engines and gas-producer plants, will be found of interest to those having to do with power production. The gas engines include the DuBois throttling single cylinder, tandem and twin tandem styles, and of a type especially designed to operate on natural and illuminating gas, also gas generated from coke, charcoal and anthracite coal by means of the company's improved producer-gas plants. All of these engines contain the latest improvements known to gas-engine construction, and in them the company has not departed from the four-stroke cycle, single-acting principle which it has found by 48 years of continuous testing and experimenting to be in its judgment the most practical and economical method of operation. The company's producer-gas plants are of the suction or pressure type, and use anthracite coal, peat or buckwheat grade. The producers are today in daily use in hundreds of installations, ranging from 4 to 1000 horsepower. The catalogue also contains two diagrams, showing the cost of producer-gas plants and their operation compared with other methods of power production.

Literary Notes.

The Portland Cement Industry from a Financial Standpoint. By Edwin C. Eckel. Publisher, Moody's Magazine, New York. Price \$2.

As indicated in the title, Mr. Eckel's book devotes itself chiefly to the financial side of the subject. Matters of purely technical importance are for this reason subordinated to the questions of financial methods and profits. Such subjects as raw materials and manufacturing processes are discussed, therefore, only as they have a distinct bearing on financial results. The opening chapters contain a brief discussion of the processes and raw materials on which cement manufacture is based, with very complete statistics covering the past history and production of Portland cement. The following chapters discuss the probable future trend of the cement industry in considerable detail, particular attention being paid to the price-history of the trade. Among the other subjects of financial interest taken up by the author are the general status of industrial bonds; the status of bonds issued for plant construction; the question of overcapitalization; the actual basis on which existing cement companies are capitalized; the methods of cement promotions, and the probable profits of the industry. The annual reports and dividend records of several leading American cement companies are tabulated and analyzed. Edwin C. Eckel is one of the best-known experts on the cement industry of the United States, the author of "Cements, Limes and Plasters," the standard work on these materials, and until recently in charge of the cement work on the United States Geological Survey.

Cement Pipe and Tile. By E. S. Hanson. Comprises over 100 pages. Bound in cloth. Illustrated. Published by the Cement Era Publishing Co., Monadnock Block, Chicago, Ill.

The manufacture of cement pipe and tile has grown to be one of the most active industries in which that material is used. Information concerning this industry, however, has been somewhat meager, and it has been to meet this want that the present volume has been published. The

work discusses in a general way the big problems of drainage. The great quantities of swamp and overflowed lands are pointed out as indicating the large field open to those engaged in the manufacture of these products. The advantages of cement for this type of construction are exhaustively handled. The chemical action of cement in soil is discussed at length, and much valuable information is given on this important subject. The results of tests on cement pipe and tile are also given. The various methods of manufacture, cost, etc., as well as the various machines for making the materials, are fully covered. Many individual plants are described, showing their layout, equipment, running expenses, output, etc., with the cost per 1000 feet figured out. The volume is illustrated throughout.

Recognizing the tendency of thousands of persons to lose no occasion for pleasant remembrances of their friends, Raphael Tuck & Sons Company, Ltd., 122-124 Fifth avenue, New York, are to the front as usual with leaflets, cards and post-cards for the Easter season. They have an extensive range appealing to the young and old, dealing either with the religious sentiments associated with the Resurrection or with the various phases of Nature's awakening after the long winter sleep, and all of them of choice design and exquisite workmanship, embodying the best in lithography and color printing.

State Geological Survey.

[Knoxville Journal and Tribune.]

Many of the States have organized surveys at various times in the past, and then through a shortsighted policy have discontinued them. Realizing their mistake later, the surveys have been re-established on a larger scale and with renewed energy.

To be effective a survey should be established with a view to maintenance for a series of years, with sufficient appropriations to carry on the work vigorously and thoroughly. When the State has been quite fully surveyed the work can then be continued on a smaller allowance, such that new developments and summarized information of the State's resources may be at all times available for those interested in its industrial conditions.

Southern Progress.

[San Francisco Chronicle.]

The MANUFACTURERS' RECORD of Baltimore is never tired of calling attention to the great advances made by the Southern States. Its most recent presentation is a remarkable one, showing as it does that the capital invested in cotton mills in the South has increased from \$21,000,000 in 1880 to \$266,500,000 in 1908, and that in all sorts of manufacturing industries it has grown from \$257,000,000 to \$2,100,000. In this latter development we find the explanation of the fact that the value of property in the South has increased from \$7,505,000,000 to \$20,050,000,000 in the period under review. The record is one of astonishing prosperity in which every industry has shared, but the greatest and most phenomenal gain is in manufactures. The South has ceased to be an agricultural country, and is now one of diversified pursuits, and when that stage is reached it is impossible to prevent a people being prosperous.

The twenty-sixth annual report of the New Orleans Board of Trade is an elaborate presentation of the commercial developments of the city during the past year. The officers of the Board of Trade are Messrs. Crawford H. Ellis, president; A. F. Leonhardt, George P. Thompson and Joseph Kohn, vice-presidents, and H. S. Herring, secretary-treasurer.

Porto Rico Wants American Products

A. Escudero, 17 San Jose street, San Juan, P. R., writes the MANUFACTURERS' RECORD:

"I am interested in representing American concerns dealing in boots, shoes, bottlers' supplies, hardware, underwear, hosiery, thread (spool cotton), men's neckwear, laces, fans, dry goods, jute bags for sugar, coal, lumber, galvanized iron, rope and pork products. There is a great demand in this country for the articles, and I am assured that a good volume of business can be procured for any manufacturing concern that wants to honor me with their representation. I have agents at the principal markets of this island, which are Ponce, Mayaguez, Aguadillo, Guayanilla and Arecibo. I also know very well the general commerce of the island, and manufacturers doing business through me would only deal with first-class export people."

To Sell American Products.

Eugenio Bianchini, The Breslin, Broadway and 29th street, New York, writes the MANUFACTURERS' RECORD:

"I am interested in the following articles: Mineral oils and greases, naval stores, paints and varnishes, dry white lead, metal ceilings and tiles, portable houses, animal grease, grains and provisions, beer and boots and shoes. I have already secured the agency for the first six items, and trust to be able to do as much for the other articles in the near future."

FINANCIAL NEWS

The MANUFACTURERS' RECORD invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

Review of the Baltimore Market.

Office MANUFACTURERS' RECORD,

Baltimore, Md., March 3.

In the Baltimore stock market during the past week prices displayed an improving tendency, and there was a large amount of business. In the trading United Railways common sold at 9% to 10; do. trust certificates, 10; the incomes from 51% to 53%; the funding 5s from 79 to 79½; do. scrip, 79 to 80; United 4s, 86 to 87%; Consolidated Gas, Electric Light & Power preferred, 77½ to 77½; do, 4½s, 84½ to 84%; Consolidated Gas Gs, 102, do, 4½s, 93% to 93½; Seaboard Company common, 11½ to 12%; do, second preferred, 23½; Seaboard 4s, 64½ to 65%; do, three-year 5s, 90½ to 90½; do, 10-year 5s, 96; Consolidated Cotton Duck, 6; do, preferred, 22½ to 24; Mt. Vernon-Woodberry Cotton Duck 5s, 77½ to 79; G.-B.-S. Brewing 1sts, 42½ to 43.

Citizens' Bank stock sold at 38½ to 38¾; Mercantile Trust, 136 to 135; Maryland Casualty, 86 to 85; United States Fidelity, 112; Fidelity & Deposit, 152.

Other securities were traded in thus: Norfolk Railway & Light stock, 18% to 19; Northern Central Railway stock, 103½ to 105; Western Maryland Railroad stock, 10 to 10½; Frederick Turnpike, 3; Reisterstown Turnpike, 3; Houston Oil common, 7½ to 8½; Atlantic Coast Line new 4s, certificates, 80½ to 85½; do. Connecticut, 5-20s, 87½; Baltimore Electric 5s, stamped, 90½ to 90½; Maryland Telephone 5s, 98; Georgia Alabama Consolidated 5s, 102% to 103½; Georgia, Carolina & Northern 5s, 105½; Maryland 3s, 96; Baltimore City 3½s, 1930, 101½; do, do, 1930, 101½; do, do, 1940, 101½; Anacostia & Potomac 5s, 103%; Baltimore City Passenger 5s, 101; Columbia & Greenville Gs, 109½; Detroit United 4½s, 84½ to 84¾; Metropolitan (Washington)

5s, 111½: Baltimore City 3½s, 1980, 93½; Carolina Central 4s, 93½; City & Suburban (Baltimore) 5s, 100½ to 100½; Baltimore City 4s, 1920, 104; City & Suburban (Washington) 5s, 105 to 105½; Charlotte, Columbia & Augusta 1sts, 111½ to 111; Georgia Southern & Florida 5s, 109½; Western Maryland 4s, 83; Atlantic Coast Line 4s, 96½; Atlanta Consolidated Street Railway 5s, 105½; Georgia Pacific 6s, 116; Baltimore City 5s, 1916, W. L., 107½; Maryland Steel 5s, 103; Charleston Consolidated Street Railway 5s, 86½; Consolidation Coal, 94½; Virginia Midland 2d, 103; West Virginia Central 6s, 102½; Baltimore City 4s, 1955, 104; Somerset Coal Equipment 5s, 100%; Baltimore Brick common, 3½; Consolidation Coal refunding, 41½s, 94; South Bound 5s, 106.

SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended March 3, 1909.

Railroad Stocks. Par Bid. Asked.

Atlantic Coast of Conn.	100	265	270
Georgia Sou. & Fla. 1st Pfd.	100	92	...
Georgia Sou. & Fla. 2d Pfd.	100	67	75
Norfolk Railway & Light.	25	18%	19
Seaboard Company Common.	100	12	12½
Seaboard Company 1st Pfd.	100	50	...
Seaboard Company 2d Pfd.	100	23	25
United Rys. & Elec. Co.	50	10	...
Western Maryland.	50	10½	11

Bank Stocks.

Citizens' National Bank.	10	38½	...
Farmers & Mer. Nat. Bank.	40	48	...
German-American Bank.	100	108	...
Maryland National Bank.	20	19	...
National Exchange Bank.	100	163½	...
National Howard Bank.	10	13	...
National Marine Bank.	30	41	...
National Mechanics' Bank.	100	280%	...
Second National Bank.	100	192	...

Trust, Fidelity and Casualty Stocks.

American Bonding Co.	25	61½	65
Continental Trust.	100	189	194
Fidelity & Deposit.	50	152	153
International Trust.	100	125	132
Maryland Casualty.	25	...	86½
Mercantile Trust & Deposit.	50	135	136
Security Stor. & Tr.	100	160	...
U. S. Fidelity & Guaranty.	100	111	...

Miscellaneous Stocks.

Ala. Con. Coal & Iron Pfd.	100	...	80
Con. Cotton Duck Common.	50	6	8
Con. Cotton Duck Pfd.	50	23	25½
Con. Gas, Elec. Lt. & P. Pfd.	100	77	78
Consolidation Coal.	100	94½	95
G. B. & Brewing Co.	100	...	4

Railroad Bonds.

Atlanta & Charlotte Ext. 4½s.	100	...	100
Atlan. Coast Line 1st 4s, 1952.	...	97	...
Atlan. Coast Line new 4s, Cfts.	...	85½	86
At. Coast L. (Conn.) 4s, Cfts.	5-208.	87	88
At. Coast Line (Conn.) 5s, Cfts.	...	108½	...
At. Coast Line (Conn.) 4s, Cfts.	82	86	...
Balto. & Annap. 8. L.	90	96	...
Carolina Central 4s, 1949.	93½	93%	...
Charlotte, Col. & Aug. 1st 5s, 1910.	111	111½	...
Columbia & Green. 1st 6s, 1916.	...	109	111
Georgia & Alabama 5s, 1943.	103	103½	...
Georgia, Car. & North. 1st 5s, 1929.	105½	106	...
Georgia Pacific 1st 6s, 1922.	115%	116½	...
Georgia South. & Fla. 1st 5s, 1945.	109	109½	...
Maryland & Penna. 4s, 1951.	91½	92½	...
Piedmont & Cum. 1st 5s, 1911.	100	...	...
Potomac Valley 1st 5s, 1941.	100	...	...
Richmond & Dan. Gold 6s, 1915.	...	110	...
Savannah, Fla. & West. 5s, 1934.	114½	115%	...
Seaboard Air Line 4s, 1950.	65½	65%	...
Seaboard Air Line 5s, 10-year, 1911.	96	96½	...
Seaboard Air Line 5s, 3-year.	96½	96½	...
Seaboard & Roanoke 5s, 1916.	100	...	...
Seaboard & Roanoke 5s, 1926.	108	...	...
South Bound 5s, 1941.	105½	106	...
Southern Ry. Con. 5s, 1994.	...	110%	...
Suffolk & Carolina 5s, 1952.	95	97	...
Virginia Midland 2d 6s, 1911.	103	103½	...
Virginia Midland 5th 5s, 1926.	108	109	...
Washington Terminal 3½s.	91½	92½	...
Western Maryland 4s, 1952.	83½	85	...
West N. C. Con. 6s, 1914.	...	108½	...
W. Va. Cent. 1st 6s, 1911.	102½	103	...
W. Va. Col. & Aug. 6s, 1910.	101½	...	...
Wilmington & Weld. Gold 5s, 1935.	114	...	...

Street Railway Bonds.

Anacostia & Potomac 5s, 1949.	103%	104%	...
Anacostia & Potomac 5s, Gtd.	...	106	...
Atlanta Con. St. Ry. 5s.	104%	105	...
Augusta Ry. & Elec. 5s, 1940.	100	100%	...
Balto. City Pass. 5s, 1911.	101	101½	...
Balto. Trac. (N. B. Div.) 5s, 1942.	114½	...	93
Central Ry. Con. 5s (Balto.), 1932.	112½	113%	...
Charleston City Ry. 5s, 1837.	105	...	...
Charleston Con. Elec. 5s, 1999.	85	86½	...
City & Suburban 5s (Balto.)	109½	109½	...
City & Suburban 5s (Wash.).	108	105½	...
Lexington Railway 1st 5s, 1949.	95	...	...
Maryland Elec. Rys. 5s.	93½	...	...
Memphis St. Ry. 5s.	95½	...	...
Metropolitan 5s (Wash.).	111	112	...
Norfolk Railway & Light 5s.	96	96%	...
Norfolk Street Railway 5s, 1944.	106	...	...
Richmond Traction 5s.	102	...	...
United Rys. 1st 4s, 1949.	87½	87½	...
United Rys. Inc. 4s, 1949.	53	53½	...
United Rys. Funding 5s.	79	80	...

Miscellaneous Bonds.

Ala. Con. Coal & Iron 5s.	...	83	...
Baltimore Electric 5s.	89%	90%	...
Consolidated Gas 6s, 1910.	102	102½	...
Consolidated Gas 5s, 1879.	...	112	...
Consolidated Gas 4½s.	93%	93½	...
Con. Gas, Elec. Lt. & P. 4½s.	84	84½	...
G. B.-8. Brewing 1st 4s.	43	43½	...
G. B.-8. Brewing Inc. 4s.	10%	13%	...
Maryland Steel Co. 5s.	103	103½	...
Maryland Telephone 5s.	97½	98%	...
Mt. Vernon-Woodby Cot. Duck 5s.	78	79	...
United Elec. Lt. & P. 4½s.	93½	...	...

SOUTHERN COTTON-MILL STOCKS.

Quotations Furnished by Hugh MacRae & Co., Wilmington, N. C., for Week Ending March 1.

Bid. Asked.

Abbeville Cotton Mills (S. C.)	75	...
Aiken Mfg. Co. (S. C.)	82	...
American Spinning Co. (S. C.)	145	...
Anderson Cotton Mills (S. C.)	59	60
Arkwright Mills (S. C.)	100	102
Augusta Factory (Ga.)	66	70
Avondale Mills (Ala.)	115	125
Belton Mills (S. C.)	115	120
Bibb Mfg. Co. (Ga.)	114	...
Brandon Mills (S. C.)	148	...
Cabarrus Cotton Mills (N. C.)	120	140
Chadwick-Hoskins Mfg. Co. (N. C.)	86	90
Chadwick-Hoskins Mills Co. (N. C.)	90	94
Pacolet Mfg. Co. (S. C.) Pfd.	97	100
Piedmont Mfg. Co. (S. C.)	168	...
Poe Mfg. Co. F. W. (S. C.)	125	130
Saxon Mills (S. C.)	122	125
Sibley Mfg. Co. (Ga.)	62	...
Spartan Mills (S. C.)	125	140
Trion Mfg. Co. (Ga.)	132	140
Tucapan Mills (S. C.)	225	250
Union-Buffalo (S. C.) 1st Pfd.	...	50
Victor Mfg. Co. (S. C.)	122	130
Warren Mfg. Co. (S. C.)	92	93
Warren Mfg. Co. (S. C.) Pfd.	100	...
Washington Mills (Va.)	25	...
Washington Mills (Va.) Pfd.	100	110
Whitney Mfg. Co. (S. C.)	140	...
Wiscasset Mills (N. C.)	125	125
Woodruff Cotton Mills (S. C.)	124	130
Woodside Cotton Mills (S. C.)	101	...
Watts Mills (S. C.)	90	94
Williamston Mills (S. C.)	105	...

Pacolet Mfg. Co. (S. C.) Pfd.	97	100
Piedmont Mfg. Co. (S. C.)	168	...
Poe Mfg. Co. F. W. (S. C.)	125	130
Saxon Mills (S. C.)	122	125
Sibley Mfg. Co. (Ga.)	62	...
Spartan Mills (S. C.)	125	140
Trion Mfg. Co. (Ga.)	132	140
Tucapan Mills (S. C.)	225	250
Union-Buffalo (S. C.) 1st Pfd.	...	50
Victor Mfg. Co. (S. C.)	122	130
Warren Mfg. Co. (S. C.)	92	93
Warren Mfg. Co. (S. C.) Pfd.	100	...
Washington Mills (Va.)	25	...
Washington Mills (Va.) Pfd.	100	110
Whitney Mfg. Co. (S. C.)	140	...
Wiscasset Mills (N. C.)	125	125
Woodruff Cotton Mills (S. C.)	124	130
Woodside Cotton Mills (S. C.)	101	...
Watts Mills (S. C.)	90	94
Williamston Mills (S. C.)	105	...

New Texas Insurance Company.

The Great Southern Life Insurance Co. of Houston, Texas, has, according to a dispatch, been chartered in that State with \$500,000 capital, and it is stated that the stockholders include more than 20 of the richest men in Texas, the total of whose fortunes is estimated at more than \$50,000,000.

The incorporators of the company are O. S. Carlton, P. K. Lyon, V. F. Keith, L. A. Carlton, William C. Hogg, John H. Kirby, W. B. Sharp, E. W. Hutchinson, J. S. Cullinan, H. B. Rice, J. S. Bonner, W. E. Richards, E. A. Peden, A. S. Cleveland, Andrew Dow, George W. Collier, T. H. Stone, George C. Greer, J. T. McCarthy, T. C. Dunn, J. S. Rice, J. T. Scott, Cecil A. Lyons, G. W. Carroll, C. H. Markham and Sam Park.

New Corporations.

Aiken, S. C.—Approved: First National Bank of Aiken; capital \$50,000; organizers, B. Sherwood Dunn, E. R. Graves, Charles E. Sprague, Leslie R. Palmer and Howard F. Butler.

Burns, Tenn.—A State bank is reported organized with George Eleazer, president; A. D. Clark, vice-president, and Miles Spencer, second vice-president.

Chester, Ga.—Chester Banking Co. has made application for charter; capital \$25,000; incorporators: D. A. Burch, W. H. Lee, J. B. Hurin, C. M. Rogers and E. F. Livingston.

Chico, Texas.—Chartered: First State Bank; capital \$10,000; incorporators, J. F. Clark, B. O. Wilkerson, J. H. Tadlock and others.

Chipley, Ga.—The officers of the Farmers and Merchants' Bank, a State institution, are J. H. Hogan, president; R. G. Robinson, vice-president; John D. Walker, financial agent, and J. T. Knight, cashier. The capital is \$25,000. Charter has been granted.

Collinsville, Okla.—Chartered: Oklahoma State Bank; capital \$25,000; E. Pleas, president; N. O. Colburn, cashier, and G. L. Hocks, assistant cashier. This is a conversion of the First National Bank.

Cordell, Okla.—Incorporated: Oklahoma State Bank; capital \$15,000; directors, H. L. Rawley, Myrtle Rawley and J. A. Duff.

Danville, Ky.—Boyle Bank & Trust Co., capital \$75,000, incorporated by Richard Gentry, Nick McDowell, L. C. Bosley, A. E. Hundley, W. G. Prewitt, R. P. McGoodwin, T. P. Bright, Richard Cobb, Monte Fox, H. G. Sandifer and J. M. Wallace.

Durant, Okla.—The First State Bank has begun business; C. F. Elerick, Oklahoma City, president; Hugh Swift, cashier; Ed F. Potts, first vice-president; G. B. Hall, second vice-president, and Harvey N. Wilson, assistant cashier.

Eastland, Texas.—Chartered: First State Bank; capital \$25,000; incorporators, H. H. Brelsford, June Kimball, T. L. Overby of Eastland, C. A. Gray of Cisco, John Dill of Rising Star.

Emory, Texas.—Chartered: First State

Bank; capital \$10,000; incorporators, B. M. Manahan, S. B. Brooks, J. W. Montgomery, L. J. and Oscar Popper.

Frankfort, Ky.—Articles of incorporation for the Potter-Matlock Trust Co., capital \$50,000, have been filed by J. Whit Potter, S. M. Matlock, F. P. Hays, Joe W. Ford and others.

Greenville, S. C.—The American Home Fire Insurance Co. has organized with Charles F. Hard, president; Ellison A. Smyth, vice-president; L. B. Houston, secretary; directors, Ellison A. Smyth, Lewis W. Parker, Henry P. McGee, J. W. Norwood, A. A. Bristow, Charles F. Hard, J. B. Bruce, J. L. Westervelt, William Goldsmith, Jr., Thomas F. Parker of Greenville; J. R. Vandever, Anderson; R. A. Lewis, Belton; Frank E. Taylor, Charles-ton; Richard I. Manning, Sunter; John McSween, Timmonsville; Arch B. Calvert, Aug. W. Smith, Spartanburg; Leroy Springs, Lancaster; George W. Summer, Newberry; A. F. McKissick, Greenwood, and D. D. Davenport, Greer. Business is to begin about April 1.

Grover, Ga.—A letter to the MANUFACTURERS' RECORD says that L. A. Shepherd and others are heading a movement to organize a bank with \$10,000 to \$20,000 capital. Mr. Shepherd is president of the Grover Fertilizer & Oil Co., of which H. R. Brown is vice-president and E. C. Stovall is secretary and treasurer.

Huntington, W. Va.—Chartered: First Trust Company and Savings Bank; capital \$300,000. George F. Miller and others are the incorporators.

Lewisville, Ark.—The First National Bank has begun business; capital \$25,000; S. W. Smith of Shreveport, La., president; C. C. Dubose, first vice-president; Capt. Ed. Alexander, second vice-president, and D. W. Gladney, cashier.

Louisville, Texas.—Chartered: Louise State Bank, capital \$10,000, by W. F. Obriant, Dan W. Wybrants, Alfred Peter, D. D. Hillyer and others.

<p

WANTED

\$100,000 to loan on first mortgage security at 6% in Charlotte and vicinity in amounts of \$2000 to \$20,000.

F. C. ABBOTT & CO. Charlotte, N. C.

Established 1835.

The Merchants National Bank

South and Water Sts., BALTIMORE, MD.

DOUGLAS H. THOMAS, President.
WM. INGLE, Vice-Prest. and Cashier.
J. C. WANDS, Asst. Cashier.

JOHN B. DUNN, Asst. Cashier.
Capital, \$1,500,000
Surplus and Profits, - - - \$900,000
Deposits, \$12,000,000

Accounts of Banks, Bankers, Corporations and Individuals solicited. We invite correspondence.

JOHN NUVEEN & CO.

1st Nat. Bank Bldg., CHICAGO

We purchase SCHOOL, COUNTY and MUNICIPAL BONDS. Southern Municipal Bonds a Specialty.

Write us if you have bonds for sale.

SURETY BONDS

We issue all kinds:—CONTRACT, FIDELITY, JUDICIAL, OFFICIAL, COURT
Also BURGLARY INSURANCE

UNITED SURETY CO.

Home Office,
BALTIMORE, MD.

W. J. GRISWOLD CO.
Gen. Agents for State of N. C.
DURHAM, N. C.

J. L. RILEY & CO.
Gen. Agents for Ga. and Fla.
Empire Bldg.
ATLANTA, GA.

General Agents in all principal cities in all other Southern States.

**COUNTY, SCHOOL AND MUNICIPAL OFFICIALS
AND CONTRACTORS**

Write us whenever you have bonds for sale

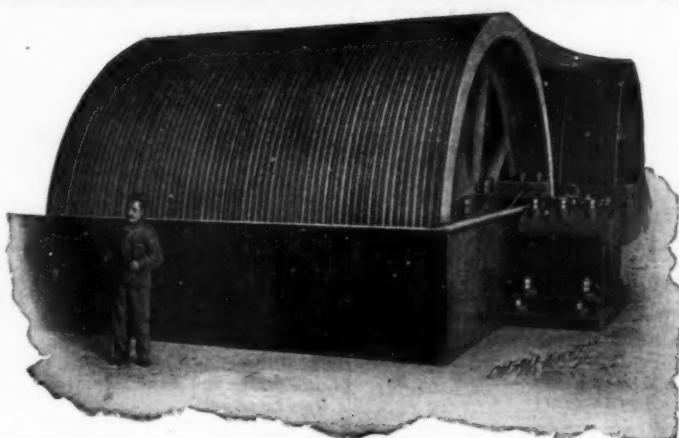
We are always in the market

Address Correspondence to

T. H. SAUNDERS, Manager Bond Department

First National Bank

Cleveland, Ohio

"AMERICAN"

Suddenly applied loads will often break belts and damage electric motors.

"American" Transmission Rope

is elastic and resilient and absorbs shocks. The stresses are distributed through numerous turns on the sheaves, preventing breakage and irregularities. Rope drive is the safest as well as the most efficient means of transmitting power. More "American" rope is now in use in the mills of the United States than all other brands combined.

Write for "Blue Book of Rope Transmission."

The American Manufacturing Co.
65 WALL STREET : : NEW YORK CITY

TRANSMISSION ROPE**Hugh MacRae & Co.**

BANKERS

MISCELLANEOUS SOUTHERN SECURITIES

COTTON MILL STOCKS

WILMINGTON, N. C.

WASHINGTON, D. C. 408 Colorado Bldg.

Lexington & Eastern 1st & Genl. 5's

Belt R. R. of Chattanooga 5's

Vera Cruz & Pacific 4 1/2's

And all Steam Railroad Securities dealt in.

F. J. LISMAN & CO.

Specialists in Steam R. R. Securities

Members New York Stock Exchange

30 Broad Street NEW YORK

State Savings Bank Bldg., Hartford

Land Title & Trust Bldg., Philadelphia

**THE FIRST NATIONAL BANK
OF KEY WEST, FLA.**

United States Depositary and Disbursing Agent

Capital, \$100,000
Surplus and Undivided Profits, - - - 40,000

A general banking business transacted.

Special attention given to collections.

INTERNATIONAL TRUST CO.**OF MARYLAND****MAKES A SPECIALTY OF SOUTHERN BUSINESS****OUR BOARD OF DIRECTORS**

Leading business men in Cotton, Iron, Railroad, Finance, Tobacco, Paper, Lumber, Copper, Dry Goods, Law, etc., constitute our twenty-four Directors—names that insure close supervision and safe leadership.

GEO. W. WATTS	Capitalist and Director American Tobacco Co.	Durham, N. C.
C. SIDNEY SHEPARD	Capitalist and Director Western Union Telegraph Co.	New York.
STEVENSON A. WILLIAMS	President Hartford National Bank.	Bethel, Md.
LLOYD LOWNDES	Vice-President Second National Bank.	Cumberland, Md.
SUMMFIELD BALDWIN	Woodward, Baldwin & Co., Cotton Goods, and Vice-President, National Exchange Bank (Baltimore).	Baltimore.
WM. C. SEDDON	Wm. C. Seddon & Co., Bankers and Brokers.	Baltimore.
CHAS. K. OLIVER	President Consolidated Cotton Deck Co.	Baltimore.
RICHARD H. EDMONDS	Smith, Dixon Co., Wholesale Paper Dealers.	Baltimore.
ISAAC H. DIXON	Middendorf, Williams & Co., Bankers and Brokers.	Baltimore.
J. WM. MIDDENDORF	Hutzler Brothers, Dry Goods.	Baltimore.
DAVID HUTZLER	Secretary Baltimore Copper Smelting & Rolling Co.	Baltimore.
JOS. O'LENDEN	Townsend Scott & Son, Bankers and Brokers.	Baltimore.
TOWNSEND SCOTT	Gandy & Hanan, Attorneys-at-Law.	Baltimore.
B. HOWARD HAMAN	Attorney-at-Law.	Baltimore.
DE COURCY W. THOM	President Maryland Portland Cement Co.	Baltimore.
EDWARD N. RICH	Vice-President.	Baltimore.
CHAS. T. WESTCOTT	Sec'y and Treas. Maryland Portland Cement Co.	Baltimore.
DOUGLAS H. GORDON	Secretary-Treasurer.	Baltimore.
SAMUEL C. ROWLAND	Editor St. Paul Dispatch.	Baltimore.
LORING A. COVER	J. S. Wilson, Jr., & Co., Bankers.	St. Paul, Minn.
CHARLES D. FENHAGEN	WALTER D. FOCKE, Assistant Secretary and Assistant Treasurer.	Baltimore.
CHARLES H. GRASSTY	JOHN T. HILL.	Baltimore.

OFFICERS

DOUGLAS H. GORDON, President. SAMUEL C. ROWLAND, Vice-President.
SUMMFIELD BALDWIN, Vice-President. CHAS. D. FENHAGEN, Sec'y and Treas.

WALTER D. FOCKE, Assistant Secretary and Assistant Treasurer.

**THE BALTIMORE
TRUST & GUARANTEE COMPANY**

BALTIMORE, MD.

Capital, : : : \$800,000
Surplus, : : : \$2,100,000

THOS. H. BOWLES, President

Acts as Executor, Administrator, Trustee, Receiver for Firms, Individuals or Corporations.

Receives Deposits subject to Check, and allows Liberal Rates of Interest thereon.

**The National Exchange Bank
OF BALTIMORE, MD.**

Hopkins Place, German and Liberty Sts.

Capital, \$1,000,000

July 15, 1908, Surplus and Profits, \$671,631.60

OFFICERS:

WALDO NEWCOMER, President.
SUMMFIELD BALDWIN, Vice-Pres.

CHARLES W. DORSEY, Vice-Pres.

R. VINTON LANSDALE, Cashier.

WM. J. DELCHER, Asst. Cashier.

Accounts of Mercantile Firms, Corporations, Banks, and Individuals invited.

Bank of Richmond

Capital and Surplus, \$1,500,000

RICHMOND, VA.

JOHN SKELTON WILLIAMS, President.
FRED'K E. NOLTING, 1st Vice-President.
T. K. SANDS, 2d Vice-President and Cashier.
H. A. WILLIAMS, Assistant Cashier.
L. D. CRENSHAW, Jr., Trust Officer.

In aiding the development of legitimate business enterprises, this bank believes that it performs a required duty, and to this end offers the services of a live, progressive bank, conservatively managed.

John L. Williams & Sons

Cor. 9th & Main Sts. BANKERS RICHMOND, VA.

DEALERS IN HIGH-CLASS SECURITIES

Negotiate Entire Issues of Bonds for States, Cities and Railroad Corporations.

Foreign Exchange Bought and Sold.

MANUFACTURERS and JOBBERS

Frequently find it necessary to have BANKING FACILITIES in addition to those offered by local banks.

FIRST NATIONAL BANK OF RICHMOND, VA.

With assets of nine million dollars, offers just the additional facilities required.

Jno. B. Purcell, President.

Jno. M. Miller, Jr., Vice-Pres. and Cashier.

JOHN W. DICKEY

SOUTHERN SECURITIES

AUGUSTA, GEORGIA**MARK PACKARD****COAL OPERATOR - BUFFALO, N. Y.**

Invites correspondence with parties desirous of investing in coal developments on the Cumberland Plateau, Tenn.

\$45,000 of Cross Creek Coal Co. 6%

Gold Bonds, covering 7000 acres of Battle Creek Coal, for sale. Most attractive Investment in the South.

Best coal, best market and best facilities in the South.

OFFICES: BUFFALO, N. Y. CHATTANOOGA, TENN.

WELCH, W. VA.

Capital Stock and Surplus.....\$5,948,449

Deposits.....\$7,900,000

Resources\$13,850,913

This Company solicits deposit accounts from Banks, Corporations and Individuals, and allows interest thereon at liberal rates conforming to conservative business.

We invite correspondence and personal interviews, and will be pleased to furnish information to those parties who desire to make deposits with us.

JOHN GILL, President.

Citizens' Loan & Trust Co.

HAWKINSVILLE, GA.

(Incorporated.)

\$25,000 PAID-IN CAPITAL.

Correspondence solicited, especially with those seeking investments in South Georgia properties or wishing to loan on first mortgage security at 7 per cent. in this section.

CITY REAL ESTATE A SPECIALTY.

J. H. TAYLOR, H. F. LAWSON, President.

Sec'y and Treas.

SURETY BONDS**Fidelity & Deposit Co.**

OF MARYLAND

Home Office, - BALTIMORE, MD.

Assets Over \$5,000,000

Pioneer Surety Co. of the South. Becomes Surety on bonds of every description.

AGENTS IN ALL PRINCIPAL CITIES.

HARRY NICODEMUS, EDWIN WARFIELD, President.

MANUFACTURERS' RECORD.

of Cassville, Mo., and Clark Pease of Corpus Christi, Texas.

Sevierville, Tenn.—The Sevier County Bank has filed its charter; capital \$30,000; incorporators, J. N., I. C. and C. M. McMahan, Dr. A. J. Isham, J. D. Brabson and W. C. Henderson.

Sumter, S. C.—Sumter Trust & Mortgage Co. organized with \$25,000 capital; directors, R. I. Manning, Davis D. Moise, H. J. McLaurin, Jr., C. D. Schwartz, J. H. Croswell and P. Moses, Jr.

Waynesville, N. C.—S. Wittkowsky of Charlotte is reported as assisting in the organization of a building and loan association. E. L. Withers is interested.

Wilmington, N. C.—Carolina Guaranty Corporation has made application for charter; capital \$1,000,000; incorporators, Chas. N. Evans, Matt J. Heyer, Milton Calder, J. Victor Granger, William B. Drake, Jr., F. W. Dick, Thomas E. Cooper, Walker Taylor, Chas. E. Taylor, Jr., and Arthur Cobb of Wilmington.

Winnisboro, Texas.—Incorporated: Farmers' State Bank, capital \$20,000, by J. H. Rhodes, L. J. Kendrick, W. S. Moore, W. D. Sutter and others.

New Securities.

Afton, Okla.—Voted: \$30,000 of water-works bonds.

Americus, Ga.—Reported that an election will be held to vote on lighting-plant bonds.

Arkadelphia, Ark.—J. C. Turner, Mayor, writes MANUFACTURERS' RECORD that \$100,000 of sewer bonds are to be offered for sale.

Austin, Texas.—The Austin National Bank has purchased \$29,000 of Travis county road and bridge bonds.

Baltimore, Md.—The Finance Commissioners will not offer for sale before May 1 the \$1,750,000 of 4 per cent. city stock unless released from an agreement with a purchaser of other stock that no more should be offered until then.

Barton Heights, Va.—Voted: \$15,000 of 6 per cent. 30-year water and sewer bonds.

Binghamton, P. O. Station C, Memphis, Tenn.—Voted: \$25,000 of sewer, electric-light and water-works bonds.

Birmingham, Ala.—W. A. Lester, Mayor, writes MANUFACTURERS' RECORD that bond election February 15 was for purpose of securing additional funds to complete two school buildings.

Brady, Texas.—Reported that election is to be held in McCulloch county to vote on \$12,000 of jail-construction bonds.

Brighton, P. O. Birmingham, Ala.—Elect to vote on \$10,000 of sewer bonds reported under consideration.

California, Mo.—Voted: \$30,000 of water-works bonds.

Carrollton, Ga.—March 30 election called to vote on light-plant bonds.

Charleston, W. Va.—Reported that election will be held in March to vote on \$80,000 of school bonds.

Charleston, Miss.—Voted: \$20,000 of sewer bonds.

Charlotte, N. C.—Bids will be received until noon March 10 by A. H. Wearn, city treasurer, for \$100,000 of 4½ per cent. 30-year funding bonds.

Chattanooga, Tenn.—Bill has been introduced in Legislature providing for \$100,000 of sewer and \$125,000 of refunding bonds; W. R. Crabtree, Mayor.

Clio, S. C.—Reported that election will be held about March 20 to vote on \$5000 of 6 per cent. 10-year railroad-aid bonds.

Covington, La.—Election March 23 to vote on \$40,000 of school bonds.

Dallas, Texas.—Application made to City Council for authority to issue \$200,000 of school bonds.

Denison, Texas.—Approved: \$50,000 of reservoir bonds.

Excelsior Springs, Mo.—Bids will be received until March 5 by Walter A. Craven, city clerk, for \$10,000 of 5 per cent. 10-20-year bridge and library bonds.

Fayetteville, Tenn.—Bill has been introduced in Legislature authorizing issue of \$30,000 of street and water-works bonds. B. E. Holman is Mayor.

Fayetteville, Tenn.—A bill authorizing Lincoln county to issue \$200,000 of 4 per cent. railroad bonds has been introduced in the Legislature.

Gadsden, Ala.—Election is to be held March 24 to vote on \$75,000 of 5 per cent. 30-year school bonds. J. D. Dunlap is Mayor, and R. M. Wilbanks, city clerk.

Gadsden, Ala.—The judiciary committee has reported unfavorably on the petition to call an election to vote on \$75,000 of water-works completion bonds, which report was accepted.

Graymont, P. O. Birmingham, Ala.—Bids are being received by W. A. Lester, Mayor, 804 John street, Birmingham, for \$10,000 of sewer and \$10,000 of school 5 per cent. 20-year bonds.

Greenville, Tenn.—Election to be held March 20 to vote on \$40,000 of water and light bonds.

Greenville, S. C.—Greenville County Commissioners have been authorized by the Legislature to issue \$65,000 railroad refunding bonds.

Halifax, N. C.—Legislature has passed bill authorizing Halifax county to issue courthouse bonds.

Harriman, Tenn.—C. E. Hendrick, Mayor, informs MANUFACTURERS' RECORD that the city will sell at private sale \$10,000 of 5 per cent. refunding bonds, due 1927.

Hartshorne, Okla.—The MANUFACTURERS' RECORD is informed that bids will be received until 9 P. M. April 12 by I. D. Patterson, city clerk, for \$80,000 of water and \$25,000 of sewer 5 per cent. 25-year bonds.

Hominy, Okla.—Reported that \$25,000 of school district bonds were recently voted.

Hempstead, Texas.—Approved: \$18,000 of 4 per cent. 5-20-year Waller county road and bridge refunding bonds.

Hot Springs, Ark.—F. V. P. Ellsworth, city engineer, informs MANUFACTURERS' RECORD that \$50,000 of 6 per cent. 1-10-year bonds of improvement district No. 32 are now on the market; also that within the next 30 days districts Nos. 21 and 26 will issue approximately \$15,000 each of 6 per cent. 1-5-year bonds, which will then be offered for sale.

Houston, Texas.—E. H. Rollins & Son, Chicago, reported awarded \$225,000 of Harris county courthouse bonds.

Independence, Mo.—Bids will be received until March 31 for \$250,000 of 4 per cent. 20-year Jackson county courthouse bonds.

Indianola, Miss.—Bids will be received until March 11 for \$10,000 of 5-20-year water-works completion bonds, interest not to exceed 5½ per cent. W. M. Kimbrough is Mayor.

Jeanerette, La.—Election called March 23 to vote on \$15,000 of Iberia and St. Mary's drainage district bonds. J. C. Akers is president.

Jonesboro, Tenn.—Washington county will vote March 13 on \$150,000 of road bonds.

Jonesboro, P. O. Birmingham, Ala.—Reported that an issue of \$30,000 of school bonds is under consideration.

Kansas City, Mo.—Reported that Jackson county will soon offer for sale \$250,000 of Poor Farm bonds.

Kansas City, Mo.—April 6 election will be held to vote on \$125,000 market square, \$50,000 house of correction, \$50,000 street repair plant, \$1,500,000 water-works, \$750,000 parks, \$200,000 incinerating

plant, \$25,000 tuberculosis hospital, \$250,000 armory, \$325,000 armory, \$175,000 museum, \$300,000 sewer and \$1,000,000 sewage-disposal plant bonds.

Kernesville, N. C.—Bill authorizing issue of street bonds passed by Legislature.

Knoxville, Tenn.—Bids will be received until 10 A. M. March 16 for \$150,000 of high school and \$50,000 of viaduct 4½ per cent. 30-year bonds; John M. Brooks, Mayor.

Lawrenceville, Ga.—Election held in Gwinnett county to vote on \$50,000 of road-improvement bonds defeated.

Lenox, Tenn.—Bank of Commerce &

FISK & ROBINSON BANKERS

Government Bonds Investment Securities

Members New York Stock Exchange

SPECIAL LIST OF CURRENT OFFERINGS ON APPLICATION

NEW YORK BOSTON CHICAGO
35 Cedar St. 28 State St. 115 Adams St.

Snowy linen, a few flowers, fine manners and pleasant conversation — they cost so little, but they make a banquet of a simple dinner.

"The Standard Paper for Business Stationery."

Old Hampshire Bond

"Look for this Water Mark"

costs so little more than common writing paper, but it gives dignity and elegance and a welcome to the ordinary business letter.

You never know what the look of a letter will do — make it look right.

Old Hampshire Bond is "made a little better than seems necessary," and is used to carry earnest, sincere messages from men who take pride in themselves and their business. A handsome specimen book showing the paper may be had by writing us on your letter-head.

Hampshire Paper Company

We are the only paper makers in the world making bond paper exclusively.

South Hadley Falls
Massachusetts



INVESTMENT SECURITIES

Southern Stocks and Bonds
Municipal and Corporation
Cotton Mill Stock & Specialty

WM. S. GLENN - Broker - SPARTANBURG, S. C.

The SOUTHERN NATIONAL BANK

WILMINGTON, N. C.

Capital and Surplus. \$300,000.00

Offers assistance and liberal treatment to
worthy business enterprises.

CORRESPONDENCE SOLICITED.

Incorporated Under Special Act of Legislature

BALTIMORE AUDIT COMPANY

1027-1029 Calvert Bldg., BALTIMORE, MD.

All work executed by or under direct supervision of Certified Public Accountants.

The Delaware Fidelity Trust Co.

Home Office—Dover, Delaware

Is especially interested in the development of the South and will assist substantial enterprises requiring additional capital.

Announces the opening of a branch office in the city of Philadelphia, where arrangements may be made for the organization and consolidation of corporations, registration of stock, and for acting as trustee in bond issues.

Correspondence solicited.

THE DELAWARE FIDELITY TRUST CO.
1415 Arch Street, Philadelphia, Pa.

DELAWARE TRUST CO. WILMINGTON, DEL.

EDWARD T. CANDY, President.
J. ERNEST SMITH, General Counsel and Vice-President.
HARRY W. DAVIS, Secretary.

Fully Equipped Department for the Organization of Corporations under advice of Counsel, and for the Registration of Corporations as required by the Delaware Law.

Represents over 500 Domestic and Foreign Corporations.

The Delaware Corporation Law is Broad, Liberal, Safe and Stable. Granting and annual taxes low.

H. T. HOLTZ & CO.

COUNTY, CITY, TOWN
AND SCHOOL BONDS

71 LA SALLE ST. CHICAGO

SIX PER CENT. OR BETTER

We own and offer the following high class investments netting 6% or better:

NEW ORLEANS RAILWAY & LIGHT CO. COUPON NOTES

J. M. THOMPSON LUMBER CO. TIMBER BONDS

WRITE US FOR PARTICULARS

Interstate Trust & Banking Co.

NEW ORLEANS

Capital and Surplus Over One Million Dollars

GO SOUTH!

For Business Opportunities, Investment Securities, Real Estate, Timber, Mines, Industrial Properties and Farm, Town or City Mortgagors in all parts of the South, correspond with

METROPOLITAN INVESTMENT CO.

GEO. B. EDWARDS, Pres., Charleston, S. C.
New York Office, Beaver Bldg., 82-92 Beaver St. Branch Office in London, Eng.

W. F. Bockmiller, Pres. John G. Hullett, Sec.

Baltimore Office Supply Co.

106 S. Eutaw St., Baltimore, Md.

MANUFACTURERS OF

Stamps, Stencils, Seals, Metal Signs, etc.
Office and Bank Supplies.

Write for prices.

THE RAMFEL MERCANTILE AGENCY

P. O. Box 296. Cable: Ramfel.

MAYAGUEZ, PORTO RICO.

The only mercantile agency in Porto Rico. All sorts of claims handled for collection. Credit reports. Adjustments. Information on business opportunities. We do business all over the island.

FELLOWS OF TENNESSEE SOCIETY OF PUBLIC ACCOUNTANTS

Edward S. Elliott, Pres.
ESTABLISHED 1888.
PUBLIC ACCOUNTANTS
AND AUDITORS

ROOMS 310-311-312 MEMPHIS TRUST BUILDING.
MEMPHIS, TENN.

FELLOWS OF THE AMERICAN ASSOCIATION OF PUBLIC ACCOUNTANTS

Trust Co. of Memphis has been awarded \$50,000 of 5 per cent. school bonds.

Lumberton, N. C.—MANUFACTURERS' RECORD is informed that bids will be received until 2 P. M. April 5 for \$25,000 of 5 per cent. 30-year funding bonds. Address J. W. Carter, chairman, Maxton, N. C., or E. J. Britt, attorney for board of commissioners, Lumberton, N. C.

Midland, Texas.—Approved: \$14,000 of 5 per cent. 5-40-year Midland county jail bonds.

Mobile, Ala.—P. J. Lyons, Mayor, will receive bids until noon March 20 for \$32,000 of 5 per cent. 1-10-year paving bonds.

Newton, Ala.—Bids will be received until noon March 15 by W. B. Mitchell, Mayor, for \$8000 of 5 per cent. water-works bonds.

North Birmingham, P. O. Birmingham, Ala.—It is probable that \$5,000,000 of water-works bonds will be issued.

Norton, Va.—April 25 election will be held to vote on \$50,000 of sewerage and street-improvement 30-year bonds.

Oklahoma City, Okla.—The election to vote on \$400,000 of park bonds will be held April 6. The election was previously reported for February 10.

Parkersburg, W. Va.—Ordinance has been introduced in City Council asking that election be held to vote on \$270,000 of water-works bonds.

Pensacola, Fla.—The City Council has received a communication from Mayor Goodman asking that steps be taken to have the Legislature authorize the sale of \$240,000 of 4½ per cent. refunding bonds.

Plainview, Texas.—Approved: \$16,000 of water-works and \$12,000 of sewer 5 per cent. 15-40-year bonds.

Salisbury, N. C.—The Senate has passed a bill authorizing an issue of water-works bonds.

Salisbury, N. C.—MANUFACTURERS' RECORD is informed that bids will be received by A. H. Boyden, Mayor, until noon March 22 for \$50,000 of 5 per cent. 45-year street-improvement bonds.

Sapulpa, Okla.—Creek school district is reported to have voted \$50,000 of high-school bonds.

Scottsville, Ky.—Weil, Roth & Co. of Cincinnati have purchased \$7500 of street-improvement bonds.

Sparta, Tenn.—March 20 election will be held in White county to vote on \$50,000 of pipe-construction bonds.

St. Petersburg, Fla.—Bids will be received by W. F. Divine, city clerk, until April 1 for \$10,000 of 5 per cent. 30-year refunding water bonds.

Pulaski, Tenn.—Giles county has been authorized by the Legislature to issue \$100,000 of courthouse bonds.

Spartanburg, S. C.—Legislature has authorized Spartanburg county to issue \$250,000 of bonds.

Stamford, Texas.—March 26 an election is to be held to vote on \$20,000 of street-improvement bonds.

Tampa, Fla.—Bill passed by City Council providing for an issue of bridge, hospital and sewer bonds.

Trenton, Ga.—Reported that May 15 Dade county will vote on \$50,000 of road bonds. T. J. Fuller is county judge.

Van Alstyne, Texas.—Election is to be held April 3 to vote on \$25,000 of independent school district bonds.

Vidalia, Ga.—Reported that election to vote on \$9000 of water-works and electric-light bonds will probably soon be held.

Washington, N. C.—Beaufort county has been authorized by Legislature to issue bonds.

Waxahachie, Texas.—The \$40,000 of Chambers Creek Valley Drainage District No. 1 bonds, it is reported, will be offered about March 15.

Wesson, Miss.—Date for receiving bids for the \$5000 of school and \$3000 of funding 5 per cent. 30-year bonds is March 2; E. B. Wimberly, city clerk.

At Salisbury, N. C., bids will be received until noon March 22 for \$50,000 of 5 per cent. 45-year street-improvement bonds. *Further particulars will be found in the advertising columns.*

At Hartshorne, Okla., bids will be received until 9 P. M. April 12 for \$80,000 of water-works and \$25,000 of sewer 5 per cent. 25-year bonds. *Further particulars will be found in the advertising columns.*

At Lumberton or Maxton, N. C., bids will be received until 2 P. M. April 5 for \$25,000 of 5 per cent. 30-year Robeson county funding bonds. *Further particulars will be found in the advertising columns.*

Financial Notes.

Mobile, Ala., is reported to have burned \$110,000 of canceled bonds.

Huntsville, Ala., is reported to have burned \$57,000 of redeemed bonds.

The American National Bank is in its new quarters at 212 Main street, Houston, Texas.

Annual convention North Carolina bankers will be held in Charlotte May 25, 26 and 27.

The Tennessee Bankers' Association will hold its annual meeting at Chattanooga May 25 and 26.

The Royal National Bank, Palestine, Texas, is reported to have absorbed the People's Bank & Trust Co.

The Bank of Comanche County, Faxon, Okla., is reported to have changed its name to the Faxon State Bank.

Notice is given that on March 31 Galveston, Texas, will redeem 15 40-year limited debt bonds issued in 1883.

Local reports state that the Nassau Bank has been consolidated with the First National Bank, both at Fernandina, Fla.

The Southern Loan & Trust Co., a real estate and investment concern, is reported to have removed its main offices from Ocilla, Ga., to Atlanta, Ga.

The City National Bank of Anniston, Ala., it is reported, has voted to increase its capital from \$100,000 to \$150,000. Thomas E. Kilby is president.

Reported the Chattooga County Bank, Summerville, Ga., is to be converted into the First National Bank of Summerville and capital increased from \$18,655 to \$30,000.

Stockholders of the Jefferson County Savings Bank, Birmingham, Ala., will vote on the question of increasing the capital from \$100,000 to \$200,000. C. F. Elslen is president.

Reported the Commercial Savings Bank of Charleston, S. C., has increased capital from \$50,000 to \$100,000, and the bank is now in its new building at King and Wentworth streets.

The Lawrence Manning Engineering & Construction Company

Camden, S. C. CHARLOTTE, N. C.

Announces its incorporation under the laws of South Carolina to carry on a General Consulting and Supervising Engineering and Contracting business in the Electrical, Mechanical, Civil, Hydraulic, Industrial and Architectural fields, and solicits inquiries for estimates, plans, specifications, reports, final tests, appraisements, etc.

Special attention given to and guarantees made for the Lowest First and Production Cost of Steam Power; Construction and Operation of Electric Railway, Lighting and Power Properties, Hydro-Electric Developments, Power Transmission, Textile Mills and other Industrial Plants.

Over eleven years' experience in the construction and operation of Railway, Lighting and Power Properties, Water-works, etc., and the manufacture of Electrical and Steam Machinery.

Lawrence Manning, Pres. and Gen. Mgr.

Wm. E. Hughes, Vice-Pres.

Newton C. Boykin, Secretary.

THE AMERICAN AUDIT CO.

THOS. P. HOWARD, C. P. A., Resident Manager.

Mutual Building, RICHMOND, VA.

Our reports are accepted by the leading financiers of the world, and are frequently made the basis of credit.

Home Office, 100 Broadway, New York

Branches in all Principal Cities

WE MANUFACTURE AND SELL MORE

POST-CARDS

THAN ANY HOUSE SOUTH OF THE MASON AND DIXON LINE
ONE TO FOUR COLORS, FROM PHOTOGRAPHS
PRICES ON APPLICATION

J. P. BELL COMPANY, INC.
LYNCHBURG, VA.

POCAHONTAS COAL

Attention is called to the securities of the Atlas-Pocahontas Coal Company, also the stock of the Norfolk & Western R. R., in McDowell County, W. Va. Both companies are desirous of interesting mill owners and jobbers, especially those located in the Carolinas. Address MARK PACKARD, Offices: Buffalo, N. Y., Chattanooga, Tenn., and Welch, W. Va.

RICHARD A. BLYTHE COTTON WARPS AND YARNS

No. 114 Chestnut Street, PHILADELPHIA, PA.

1018 Century Bldg., Atlanta, Ga., W. H. Harris, Representative.
Hawes Bros. & Blythe, Fall River, Mass.

"CAMCO"

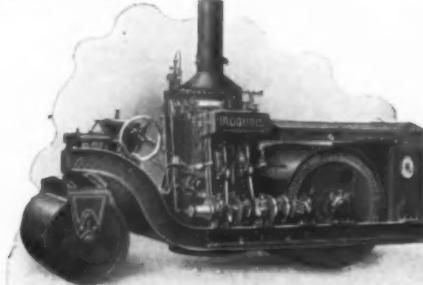
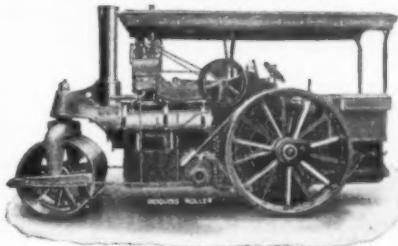
Improved Steel Ceilings are in a class by themselves, being the profit-sharing kind. They allow the largest profit because they are easier to erect, fit better and give a neater appearing job when completed. No alterations on account of bad alignment or bad joints, because the construction is right. Send today for our book of beautiful designs and prices. A postal will do.

THE CANTON ART METAL COMPANY

CANTON, OHIO

NEW YORK OFFICE, 525 W. 23d STREET

THEIROQUOIS IRON WORKS STEAM ROLLERS



THE AMERICAN STANDARD FIFTEEN YEARS EXPERIENCE BUFFALO, N. Y.

ALPHABETICAL INDEX OF ADVERTISERS.

Ads. marked * appear every other week. Ads. marked † appear in first issue of the month. Ads. marked ‡ not in this issue.

FOR "CLASSIFIED OPPORTUNITIES" See Pages 94 and 95

A	Buckeye Iron & Brass Works	142	Dixon Crucible Co., Joseph	124, 152	Hudson Engineering Co.	133	Merchants Warehouse Co.	13	Robertson, W. W.	97	
Abbott & Co., F. C.	Bucyrus Company	104	Dobie Fdry. & Machine Co.	1	Hughes Specialty Well Dril. Co.	132	Metropolitan Investment Co.	90	Robertson Sons & Co., G. O.	97	
Aebendroth & Root Mfg. Co.	Buda Foundry & Mfg. Co.	152	Dodge & Co.	1	Humphreys, C. R.	98	Robins Conveying Belt Co.	25	Robins & Co., G. O.	97	
Abrasive Material Co.	Buffalo Forge Co.	53	Donahoe & Co., J. F.	26	Hungerford & Terry	16	Robins & Orr	102	Robins & Co.	60	
Albany Fdry. & Mch. Works	Buffalo Steam Pump Co.	126	Donigan & Barrett	26	Hutchins, M.	96, 98	Miles, A.	12	Robinson & Orr	102	
Albany Steam Trap Co.	Buffalo Steam Roller Co.	107	Doubleday & Barrett	109	Hutchins Bros. Mfg. Co.	136	Milward, F.	26	Rock Island Frisco Lines	146	
Alberger Condenser Co.	Burnett, George W.	26	Dow Wire & Iron Works Co.	140	Hydro Bros. & Co.	102, 107	Milton Mfg. Co.	121	Robinson's Son Co., John A.	54	
Alberger Pump Co.	Burr & Son, John T.	22	Draper Co.	141	Hydraulic Press Brick Co.	1	Morris, Brown & Co.	54	Rouleau, Brown & Co.	54	
Alberger Pump Co.	Burriss & Son, John T.	47	Druil Oak Belting Co., Inc.	20	Hyndman Roofing Co.	48	Rogers-Snow Co., The	37	Rouleau, Brown & Co.	54	
Adams, George J.	Burriss Engineering Co.	98	Dubois Iron Works	12	I		Routz, B. M.	39	Rossendale, Reddaway Baling & Hoe Co.	97	
Alpha Photo-Engraving Co.	Bussey, Arthur S.	95	Dufur, Bagnat & Co.	43	Ideal Electric Co.	148	Rossiter, MacGorern & Co., Inc.	100	Rossiter, MacGorern & Co., Inc.	97	
Alpha Portland Cement Co.	Byers Machine Co., John F.	119	Dufur & Co.	41	Illinois Central Railroad	146	Roxwell Telegraphic Co.	93	Roxwell Telegraphic Co.	93	
Alpha State Co., The	C	Byers Machine Co., John F.	119	Dunning, W. D.	93	Illinois Supply Co.	127	Roxford Fdry. & Mch. Co.	1	Roxford Fdry. & Mch. Co.	1
Aisling Engineering Co., J. R.	C., c. o. Manufacturers' Record	96	DuPont De Nemours Powder Co., E. L.	13	Independent Pneumatic Tool Co.	3	Rucker, B. Parks.	26	Ruggles-Oales Engineering Co.	36	
Aluminum Co. of America	Caldwell Co., Inc., W. E.	121	Eagle Wagon Works	107	Indialkai Works	143	Ruggles-Oales Engineering Co.	36	Russell, Burdall & Ward Bolt & Nut Co.	100	
American Air Compress. Wks.	Caldwell Co., Inc., W. E.	120	East Bangor Cons. State Co.	140	Indian Refining Co.	93	Russell-Compton Co.	100	Russell-Compton Co.	100	
American Audit Co.	Cameron Smith Tank Co.	102	Eco Magneto Clock Co.	49	Indianapolis Electric & Supply Co.	142	S				
American Blower Co.	Cameron & Harley Co.	100	Economy Electric Co., The	1	Indianapolis Switch & Fwd. Co.	100	Sachsenmaier, George.	100	Sachsenmaier, George.	100	
American Bolting Cloth Co.	Campbell, Thos. J.	100	Edison Portland Cement Co.	31	Indiana Steel Co.	140	Saco & Fette Machine Shops	141	Saco & Fette Machine Shops	141	
American Bridge Company of New York	Canton Art Metal Co., The	91	Egleston, Howard	76	International Car Co., The	140	Safety Car Heat & Light Co.	148	Safety Car Heat & Light Co.	148	
American Cast Iron Pipe Co.	Canton Bridge Co.	49	Electric Cable Co.	148	International Crossing & Construction Co.	106, 131	Saginaw Mfg. Co.	22	Saginaw Mfg. Co.	22	
American Cement Co.	Cantoni Culvert Co.	15	Electric Supply Co.	148	International Filter Co.	16	Salem Foundry & Mch. Wks.	1	Salem Foundry & Mch. Wks.	1	
American Cotton Oil Co.	Carbondale Machine Co.	15	Emerson Steam Pump Co.	140	International Lumber Co.	125	Samuel, Frank.	34	Samuel, Frank.	34	
American Engine Co.	Carbondale Machine Co.	14	Faribanks Steam Shovel Co.	115	International Trust Co. of Md.	89	Schofield's Sons Co., J. S.	5	Schofield's Sons Co., J. S.	5	
American Frog & Switch Co.	Carlin's Sons Co., Thomas	101	Fairbanks Steam Shovel Co.	115	J. W. Jones	17	Schreiber & Sons Co., L.	40	Schreiber & Sons Co., L.	40	
American Hoist & Derrick Co.	Carnel, George	127	Farrar Co., B., Ltd.	1	Jewett, Biselow & Brooks	152	Johnson, E. J.	48	Schroeder, George G.	26	
American Iron & Steel Mfg. Co.	Carolina Asbestos Mfg. Co.	17	Farris Bridge Co.	42	Jones & Laughlin Steel Co.	40	Koehler Co., E.	5	Schofield Engineering Co.	32	
American Laundry Machinery Mfg. Co.	Carolina Portion of Cement Co.	90	Fidelity & Deposit Co. of Md.	89	Jones & Co., L. E.	45	Scott, Mfg. Co.	100, 121	Scott, Mfg. Co.	100, 121	
American Locomotive Co.	Caroline Iron Works	5	Fitzpatrick, H. C.	121	Kaiser & Co., A. V.	100	Scott Roofing & Mfg. Co.	48	Scott, Williams.	137	
American Luxfer Prism Co.	Carver Cotton Gin Co.	148	Fitzpatrick, H. C.	121	Kaiser, Louis E.	93	Seaboard Air Line Railway	145	Seaboard Air Line Railway	145	
American Machine Co.	Carver File Co.	148	Fitzpatrick, H. C.	121	Kaiser & Co.	93	Seaboard Cotton Oil Co.	97	Seaboard Cotton Oil Co.	97	
American Mch. & Mfg. Co.	Casey, Joseph Huntley	143	Fitzpatrick, H. C.	121	Kansas City Elevator Mfg. Co.	24	Seller's Co., Inc.	115	Seller's Co., Inc.	115	
American Mfg. Co.	Castell & Trefny	143	Fitzpatrick, H. C.	121	Keeeler Co., E.	5	Senier Manufacturing Co.	16	Senier Manufacturing Co.	16	
American Pulley Co.	Clinton, J. J. & Bullitt	13	Fondig & Co., C. Albert	42	Keighley Son, Benj. F.	40	Seyfert's Sons, Inc., L. F.	100	Seyfert's Sons, Inc., L. F.	100	
American Pulverizer Co.	Co., C. Clinton, J. J. & Bullitt	128	Fondig & Co., C. Albert	42	Kennicott Water Softener Co.	16	Seyfert & Bro., Sam'l R.	95	Seyfert & Bro., Sam'l R.	95	
American Railway Supply Co.	Central Foundry Co.	148	Fondig & Co., C. Albert	42	Kentucky Electrical Co.	148	Shand Engineering Co.	26	Shand Engineering Co.	26	
American Rolling Mill Co.	Central Metal & Supply Co.	118	Fondig & Co., C. Albert	42	Kentucky Mfg. Co.	122	Shaw Co., Benjamin F.	97	Shaw Co., Benjamin F.	97	
American Safety Lamp, Mine & Supply Co.	Chambers Bros. Co.	127	Fleet & Robinson	50	Kingsbury Mfg. Co.	129	Shelby Steel Tube Co. (see National Tube Co.)	*	Shelby Steel Tube Co. (see National Tube Co.)	*	
Amer. Saw Mill Mch. Co.	Charlotte Plaster Co.	127	Fleet & Robinson	50	Kirkman File Co.	43	Shepherd Engineering Co.	4	Shepherd Engineering Co.	4	
American Sheet & Tin Plate Co.	Chase Spring Works	19	Fleet & Robinson	50	Kirkpatrick, F. H.	100	Shields, W. S.	26	Shields, W. S.	26	
American Spiral Pipe Works	Chase Spring Works	19	Fleet & Robinson	50	Kirkpatrick, F. H.	100	Shiner & Sons, Samuel J.	139	Shiner & Sons, Samuel J.	139	
American Steel & Wire Co.	Chattanooga Iron & Wire Wks.	35	Fleet & Robinson	50	Kirkpatrick, F. H.	100	Sister Manufacturing Co.	16	Sister Manufacturing Co.	16	
American Stoker Co.	Chattanooga Paint Co.	47	Fleet & Robinson	50	Kirkpatrick, F. H.	100	Sixty-Fourth & Western Co.	29	Sixty-Fourth & Western Co.	29	
American Stone Co.	Chesapeake Belting Co.	22	Fleet & Robinson	50	Kirkpatrick, F. H.	100	Simeone-Mayrant Co.	27	Simeone-Mayrant Co.	27	
American Supply Co. of Providence, R. I.	Chesapeake Iron Works	42	Fleet & Robinson	50	Kirkpatrick, F. H.	100	Simpson Roofing Co.	48	Simpson Roofing Co.	48	
American Valve & Meter Co.	Chesapeake Steamship Co.	24	Fleet & Robinson	50	Kirkpatrick, F. H.	100	Sinclair Laundry Mach'y. Co.	50	Sinclair-Scott Co.	32, 109	
American Water Softener Co.	Chesapeake Steel Co.	16	Fleet & Robinson	50	Kirkpatrick, F. H.	100	Sinclair-Scott Co.	32, 109	Sinamahoning Powder Mfg. Co.	*	
American Well Works.	Chesapeake Steel Co.	13	Fleet & Robinson	50	Kirkpatrick, F. H.	100	Sirrine J. E.	18	Sirrine J. E.	18	
Ames & Co., W.	Chicago Concrete Mach. Co.	120	Fleet & Robinson	50	Kirkpatrick, F. H.	100	Skillin & Richards Mfg. Co.	96	Skillin & Richards Mfg. Co.	96	
Anderson, South Carolina	Chicago House Wrecking Co.	90	Fleet & Robinson	50	Kirkpatrick, F. H.	100	Smead, W. H.	26	Smead, W. H.	26	
Anderson Machine & Foundry Co.	Chicago Pneumatic Tool Co.	111	Fleet & Robinson	50	Kirkpatrick, F. H.	100	Smith-Courtney Co.	4	Smith-Courtney Co.	4	
Andrews, Perry	Chicopee Iron Works	128	Fleet & Robinson	50	Kirkpatrick, F. H.	100	Smith, C. Morgan.	135	Smith, C. Morgan.	135	
Anschutz, H. E.	Chicopee Iron Works	128	Fleet & Robinson	50	Kirkpatrick, F. H.	100	Smith, C. Morgan.	135	Smith, C. Morgan.	135	
Aquabar Co., The	Chicopee Iron Works	128	Fleet & Robinson	50	Kirkpatrick, F. H.	100	Smith Machine Co., H. B.	138	Smith Machine Co., H. B.	138	
Armitage Mfg. Co.	Chicopee Iron Works	128	Fleet & Robinson	50	Kirkpatrick, F. H.	100	Smithy Co., S. R.	27	Smithy Co., S. R.	27	
Arnold Co., The	Chicopee Iron Works	128	Fleet & Robinson	50	Kirkpatrick, F. H.	100	Somerset Coal Co.	13	Somerset Coal Co.	13	
Artesian Well & Supply Co.	Chicopee Iron Works	128	Fleet & Robinson	50	Kirkpatrick, F. H.	100	South Bend Machine Mfg. Co.	20	South Bend Machine Mfg. Co.	20	
Arundel Sand & Gravel Co.	Chicopee Iron Works	128	Fleet & Robinson	50	Kirkpatrick, F. H.	100	Southern Lime & Cement Co.	20	Southern Lime & Cement Co.	20	
Ash Grove Lime & Portland Cement Co.	Chicopee Iron Works	128	Fleet & Robinson	50	Kirkpatrick, F. H.	100	Southern Manufacturing Co.	16	Southern Manufacturing Co.	16	
Asheville Real Estate Co.	Chicopee Iron Works	128	Fleet & Robinson	50	Kirkpatrick, F. H.	100	Southern National Bank, The	90	Southern National Bank, The	90	
Atlanta, B'ham & Atlantic R.R.	Chicopee Iron Works	128	Fleet & Robinson	50	Kirkpatrick, F. H.	100	Southern Pacific Co.	147	Southern Pacific Co.	147	
Atlanta Steel Co.	Chicopee Iron Works	128	Fleet & Robinson	50	Kirkpatrick, F. H.	100	Southern Pipe Covering Co., Inc.	*	Southern Pipe Covering Co., Inc.	*	
Atlanta Utility Works	Chicopee Iron Works	128	Fleet & Robinson	50	Kirkpatrick, F. H.	100	Southern Railway Co.	145	Southern Railway Co.	145	
Atlantic Electric Co., Inc.	Chicopee Iron Works	128	Fleet & Robinson	50	Kirkpatrick, F. H.	100	Southern States Port. Com. Co.	10	Southern States Port. Com. Co.	10	
Atlantic Equipment Co.	Chicopee Iron Works	128	Fleet & Robinson	50	Kirkpatrick, F. H.	100	Southern Steam Feed Works.	138	Southern Steam Feed Works.	138	
Atlas Machine Co.	Chicopee Iron Works	128	Fleet & Robinson	50	Kirkpatrick, F. H.	100	Southern Wash. Co.	16	Southern Wash. Co.	16	
Atlanta Portland Cement Co.	Chicopee Iron Works	128	Fleet & Robinson	50	Kirkpatrick, F. H.	100	Southern Wind. & Boiler Wks.	10	Southern Wind. & Boiler Wks.	10	
Audit Co. of New York, The	Chicopee Iron Works	128	Fleet & Robinson	50	Kirkpatrick, F. H.	100	Southern Wind. & Boiler Wks.	10	Southern Wind. & Boiler Wks.	10	
Austin Mfg. Co.	Chicopee Iron Works	128	Fleet & Robinson	50	Kirkpatrick, F. H.	100	Southern Wind. & Boiler Wks.	10	Southern Wind. & Boiler Wks.	10	
Austin-Western Co., Ltd., The	Chicopee Iron Works	128	Fleet & Robinson	50	Kirkpatrick, F. H.	100	Southern Wind. & Boiler Wks.	10	Southern Wind. & Boiler Wks.	10	
Avery Co.	Chicopee Iron Works	128	Fleet & Robinson	50	Kirkpatrick, F. H.	100	Southern Wind. & Boiler Wks.	10	Southern Wind. & Boiler Wks.	10	
B											
Babcock & Wilcox Co.	C., c. o. Manufacturers' Record	5	Hager Lime & Mfg. Co., The	29	Ober Mfg. Co.,	137	T				
Badger & Sons Co., E. B.	C., c. o. Manufacturers' Record	100	Gainesville Iron Works	124	Ober, Frank E.	100	Talbot, E. H.	144	Talbot, E. H.	144	
Bailey-Lesby Co.	C., c. o. Manufacturers' Record	100	Gainesville Iron Works	124	Obie Elevator & Machine Co.	1	Taylor, Iron & Steel Co.	113	Taylor, Iron & Steel Co.	113	
Baldwin Equip. & Supply Co.	C., c. o. Manufacturers' Record	101	Gainesville Iron Works	124	Ohio Laundry Mch'y. Co.	50	Taylor Iron & Steel Co.	113	Taylor Iron & Steel Co.	113	
Baldwin Locomotive Works	C., c. o. Manufacturers' Record	101	Gainesville Iron Works	124	Ohio Laundry Mch'y. Co.	50	Taylor Iron & Steel Co.	113	Taylor Iron & Steel Co.	113	
Baltimore Audit Co.	C., c. o. Manufacturers' Record	101	Gainesville Iron Works	124	Ohio Laundry Mch'y. Co.	50	Taylor Iron & Steel Co.	113	Taylor Iron & Steel Co.	113	
Baltimore Belt Co.	C., c. o. Manufacturers' Record	101	Gainesville Iron Works	124	Ohio Laundry Mch'y. Co.	50	Taylor Iron & Steel Co.	113	Taylor Iron & Steel Co.	113	
Baltimore Bridge Co.	C., c. o. Manufacturers' Record	101	Gainesville Iron Works	124	Ohio Laundry Mch'y. Co.	50	Taylor Iron & Steel Co.	113	Taylor Iron & Steel Co.	113	
Baltimore Cooperage Co.	C., c. o. Manufacturers' Record	101	Gainesville Iron Works	124	Ohio Laundry Mch'y. Co.	50	Taylor Iron & Steel Co.	113	Taylor Iron & Steel Co.	113	
Baltimore Office Supply Co.	C., c. o. Manufacturers' Record	101	Gainesville Iron Works	124	Ohio Laundry Mch'y. Co.	50	Taylor Iron & Steel Co.	113	Taylor Iron & Steel Co.	113	
Baltimore Steam Packet Co.	C., c. o. Manufacturers' Record	101	Gainesville Iron Works	124	Ohio Laundry Mch'y. Co.	50	Taylor Iron & Steel Co.	113	Taylor Iron & Steel Co.	113	
Baltimore Trust & Guarantee Co.	C., c. o. Manufacturers' Record	101	Gainesville Iron Works	124	Ohio Laundry Mch'y. Co.	50	Taylor Iron & Steel Co.	113	Taylor Iron & Steel Co.	113	
Bandy Myers	C., c. o. Manufacturers' Record	26	Gainesville Iron Works	124	Ohio Laundry Mch'y. Co.	50	Taylor Iron & Steel Co.	113			

